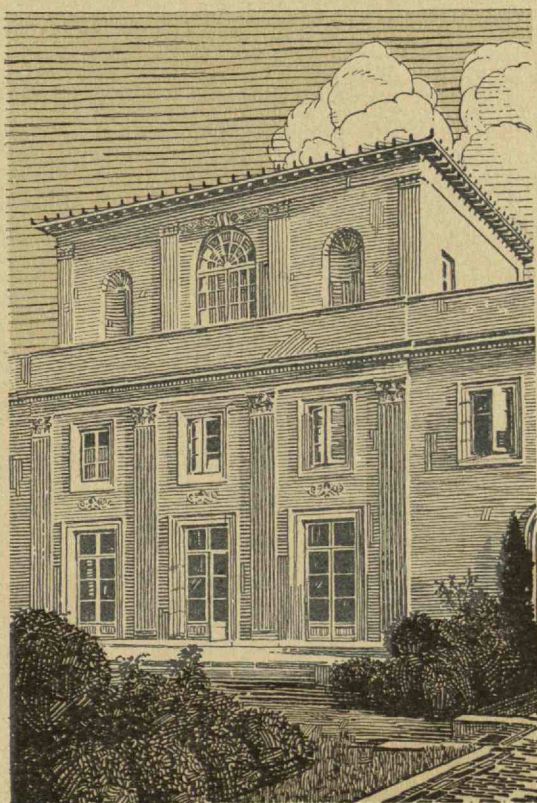


THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS
INSTITUTE OF TECHNOLOGY



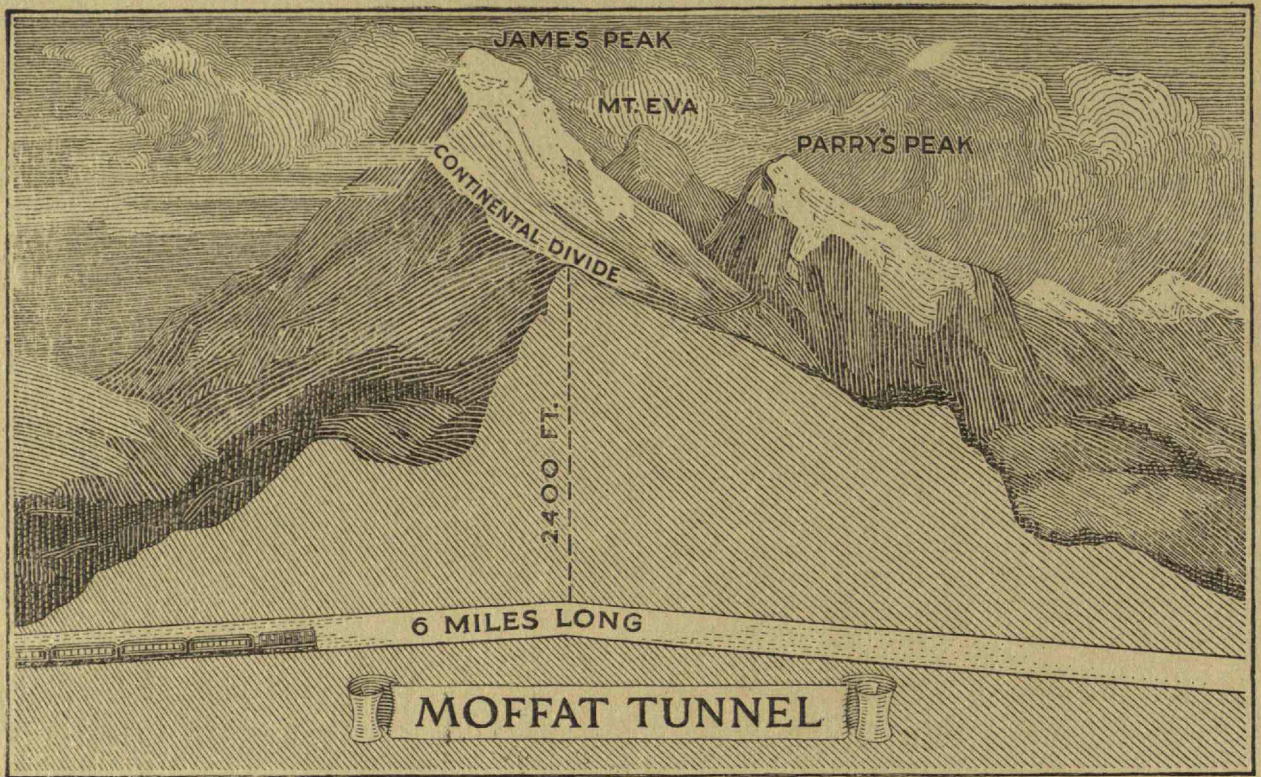
APRIL
1 9 2 5

PUBLISHED BY THE ALUMNI ASSOCIATION

technology review

Published by MIT

This PDF is for your personal, non-commercial use only.
Distribution and use of this material are governed by copyright law.
For non-personal use, or to order multiple copies please email
permissions@technologyreview.com.



Piercing the Great Divide



The General Electric Company includes many specialists—engineers who know about tunnels; engineers who know about street lighting; engineers who know about the electrification of factories. These men are helping to build the better and happier America in which *you* will live.

If you are interested in learning more about what electricity is doing, write for Reprint No. AR391 containing a complete set of these advertisements.

West of Denver is the Continental Divide; hemmed in behind it is an undeveloped district twice as large as Maryland. That fertile area the new Moffat Tunnel will open up.

General Electric mine locomotives are carrying out the rock, and G-E motors are driving air compressors and pumping water from underground rivers.

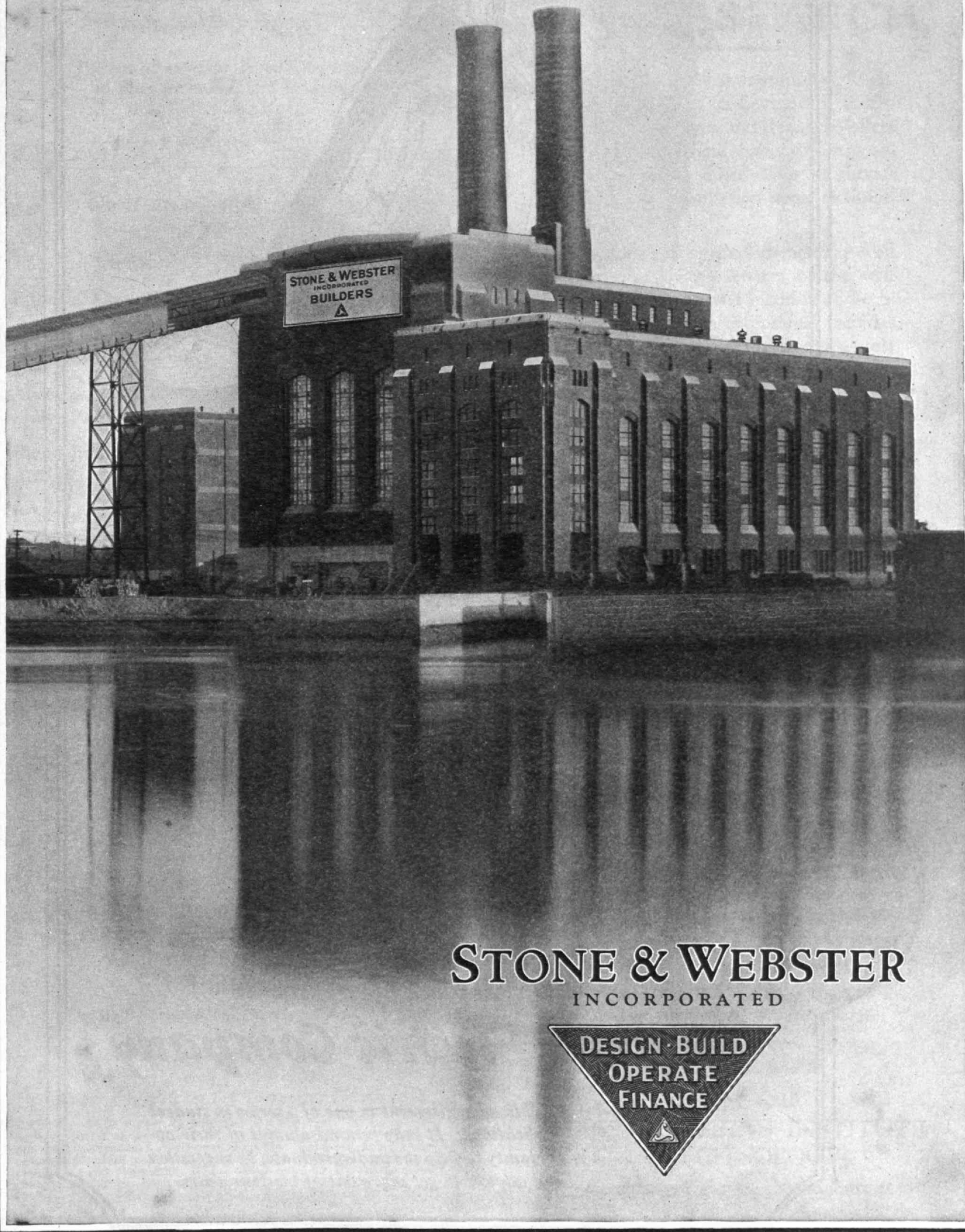
The conquests of electricity on land and sea, in the air and underground, are making practical the impossibilities of yesterday. It remains only for men of ability to find new things to do tomorrow. Thus does Opportunity of 1925 beckon college men and women toward greater things as yet undreamed, and to a better world to live in.

14-3DH

GENERAL ELECTRIC

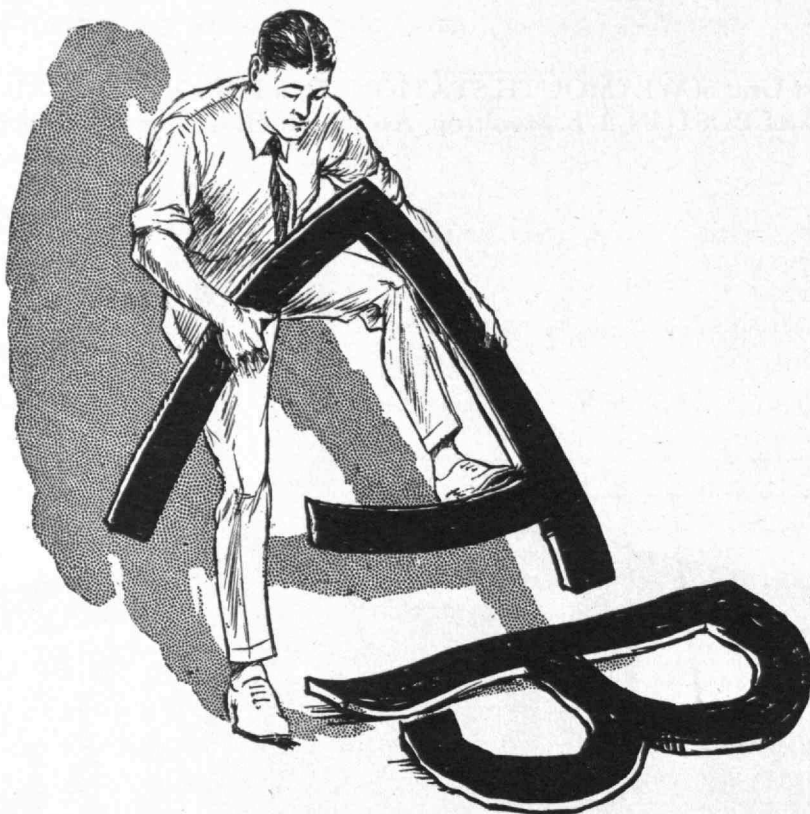
GENERAL ELECTRIC COMPANY, SCHENECTADY, NEW YORK

First Unit of WEYMOUTH STATION, THE EDISON ELECTRIC ILLUMINATING
CO. of BOSTON, I. E. Moulthrop, Ass't Supt., Bureau of Construction—60000 Kw.



STONE & WEBSTER
INCORPORATED





Pretty hard to make it read "E. E."

WHY waste time and energy trying to twist yourself into an engineer when your natural bent is away from matters technical? It isn't necessary.

In these days, industry, and particularly the electrical industry, is so broad as to require men in all lines of work. Engineers of course, but there is plenty of opportunity for men in the purchasing, manufacturing, accounting, legal and other commercial departments as well.

There's a good rule to follow. Find out what work you are naturally fitted for — then go to it. And isn't it better to be a first-rate A. B. than a second-rate E. E.?

*Published in
the interest of Elec-
trical Development by
an Institution that will
be helped by what-
ever helps the
Industry.*

Western Electric Company

This advertisement is one of a series in student publications. It may remind alumni of their opportunity to help the undergraduate, by suggestion and advice, to get more out of his four years.

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS
INSTITUTE OF TECHNOLOGY

*Published monthly, from November
to May inclusive, and in July
at Cambridge, Mass.*

Vol. XXVII

No. 6

Contents for April, 1925

Cover Design by Kenneth Reid, '18

The Past Month	293
Editorial Comment	298
Backgrounding the Institute	299
<i>By James P. Munroe, '82</i>	
Aristotle was Right	304
<i>By W. R. Whitney, '90</i>	
Blond Indians of the Darien Jungle	308
<i>By R. O. Marsh, '05</i>	
What about the Reunion?	313
<i>By Orville B. Denison, '11</i>	
Who and Why	315
The Endowment Fund After Five Years	317
The Architectural Bulletin	319
DEPARTMENTS	
Undergraduate Affairs	324
News from the Alumni Clubs	327
News from the Classes	329



H. E. LOBDELL, '17 *Editor*
E. F. HODGINS, '22 *Managing Editor*
R. E. ROGERS *Contributing Editor*
J. E. BURCHARD, 2D, '23 *Assistant Editor*

PUBLISHED BY THE ALUMNI ASSOCIATION

Thomas B. Booth, '95, *President*

Orville B. Denison, '11, *Secretary-Treasurer*

Entered as Second Class Mail Matter at the Post Office
at Boston, Mass.

Copyright, 1925, by The Technology Review.

TERMS:—\$3.50 a year, in advance; a single copy, 50 cents. To
undergraduates of the Massachusetts Institute of Technology \$2.50
per year, in advance; a single copy, 35 cents. Canadian and Foreign
postage, 50 cents per year additional. Back numbers over three
months old, 60 cents each. Three weeks must be allowed to effect
changes of address. Both old and new addresses should be given.

The DIVISION of INDUSTRIAL CO-OPERATION and RESEARCH

- ☐ The Massachusetts Institute of Technology, through its Division of Industrial Co-operation and Research, offers to engineering and manufacturing concerns of many descriptions a contract service for consultation upon technical problems.
- ☐ Through this agency, clients may avail themselves of the services of the staff of the Massachusetts Institute of Technology and of its exceptional facilities for research and investigation in almost all fields of applied science.
- ☐ Firms themselves possessing limited research facilities or wishing to obtain expert services not otherwise available are invited to examine into the possibilities which the Division may have for dealing with their problems.
- ☐ The scope of investigations undertaken ranges from a fifteen-minute test of the tensile strength of hemp to a five-year investigation of the problems of the action of boiler feed water, and includes such diverse fields as microbiology and automotive engineering; photo-elasticity and ore-extraction.
- ☐ A pamphlet describing in more detail the technical function of the Division of Industrial Co-operation and Research will be mailed upon request.

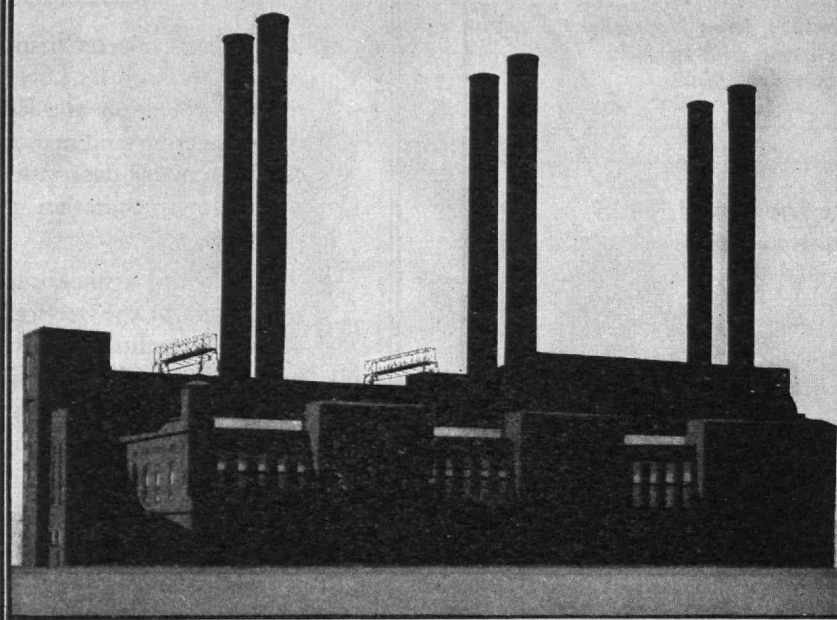
*In addition to its Contract Section,
the Division operates a Personnel
Section, primarily for the employer
of technical men who desires to add
to his own staff. Inquiry is welcome.
The services of the Personnel
Section are offered without charge.*

Address all Inquiries to

ROOM 3-210

MASSACHUSETTS INSTITUTE
of TECHNOLOGY

Cambridge : Massachusetts



MAXIMUM·RETURN·PER·DOLLAR·INVESTED
 AS A RESULT OF
 LOW FIRST COST-RELIABILITY-FUEL ECONOMY

COLFAX POWER STATION

PITTSBURGH

DUQUESNE LIGHT COMPANY

ONE HALF MILLION TONS OF COAL
 conserved in 1924 by operating this plant.

DESIGNED AND BUILT
 by

DWIGHT P. ROBINSON & COMPANY

INCORPORATED

ENGINEERS AND CONSTRUCTORS

NEW YORK

CHICAGO
 MONTREAL
 LOS ANGELES

ATLANTA
 PHILADELPHIA
 RIO DE JANEIRO

THE TECHNOLOGY REVIEW

RELATING TO THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Vol. XXVII

APRIL, 1925

No. 6

The Past Month

WHEN The Review made editorial plea in its February issue for a Planning Board which might early commence upon a detailed study of the architectural problems of the Future Technology, it scarcely imagined that within two months it would be giving thanks that its prayer was answered. But the consummation has come to pass, and it is here The Review's important duty and considerable pleasure to announce that the Executive Committee of the Corporation at its meeting of March 3 authorized Jacques Carlu, Professor of Architectural Design at the Institute, and Harry J. Carlson, '92, of Coolidge and Carlson, Architects, together to undertake the study of future needs, and to draw up specific plans for their suggested completion.

Credit for initiating this arrangement is to be laid at the door of Professor William Emerson, Head of the Department of Architecture, who has for some time been quietly agitating for just such a survey as The Review independently urged in public two months ago. As a result, Technology's planning problem will be referred not to a large, loosely organized voluntary committee, but to an especially created temporary architectural firm, commissioned to begin immediate studies. Funds have already been appropriated to care for the expenses incidental to the survey, which is to include plans for the utilization of the new land, additions to existing educational buildings, new educational buildings, gymnasias, dormitories, athletic fields, treatment of Eastman Court, and, in fact, all problems of future development and expansion which can be foreseen as the work

progresses. It is thus to be expected that the Institute will find itself possessed of the first orderly plan of expansion since it moved across the Charles. To The Review will fall the privilege of making public from time to time, such drawings and reports as are appropriate to publication. The survey is to be completed in one year.



Notman

JACQUES CARLU

Professor of Architectural Design who under a new plan will have much influence in shaping Technology's future building program

FULFILLMENT of the prediction made by The Review in April, 1924, that "Provision for retiring allowances and death benefits for members of the Institute's staff seems now close to actuality" is expected daily as this issue goes to press. The Faculty committee's study of three years has been followed by consideration of a year's length from the Executive Committee of the Corporation, in which body action is now imminent. It is understood that the plan as originally stated has undergone several modifications, none of which, however, modify to any great extent, its structure as a contributory pension plan. The innovation, of much importance, and long needed at the Institute, will be outlined in detail in The Review's pages as soon as formal action by the Executive Committee has taken place.

FOR its One Hundred and Eleventh Meeting, the Alumni Council met with the Faculty Club in Walker Memorial on March 2 — the date being one week later than is usual because of the celebration of Washington's Birthday on February 23. Beyond the reading of the slate of nominees for Alumni office next year, no business was transacted, and the joint membership present were accorded the privilege of hearing

Professor H. P. Hammond of the Brooklyn Polytechnic Institute speak upon the subject of "The General Investigation of Engineering Education." Professor Hammond is Associate Director of the Board of Investigation and Coördination established somewhat over a year ago by the Society for the Promotion of Engineering Education, for the purpose of making a field survey of technical education in this country and comparing it with technical education abroad. William E. Wickenden, former Associate Professor of Electrical Engineering at the Institute, is the present Director of the Bureau, and published, in the May 1924 issue of *The Review*, a paper on "Live Issues in Engineering Education" which for the first time set the matter before Technology Alumni. The Council meeting was well attended, and there was much discussion and debate — mostly from Faculty members rather than Alumni — of the points Professor Hammond raised.

ARTISTS from Technology have occupied considerable newspaper space during the past month. Almost simultaneously there come reports from Boston, Washington and Chicago with respect to different Institute wielders of the brush and pencil. From Chicago comes the announcement of a recent exhibition of Technology student architectural drawings held at the Art Institute of that city. Washington contributes the news that the John Taylor Arms, '11, exhibition which was commented upon last month in *The Review* when it was being shown in Baltimore, has now moved to the capital. Mr. Arms, it further appears, is to give a solo exhibition this year in London and Paris as well as in several American cities. On March 21, he was to have given a demonstration in the Smithsonian Institution in Washington on "How Etchings are Made."

In Boston there has recently been an exhibition of paintings by Charles H. Woodbury, '86, held at the gallery of the Guild of Boston Artists. The paintings were for the most part inspired by airplanes and in particular by the world flyers when they landed in Boston. Mr. Woodbury shows quite clearly that there may be sky deeps as well as sea deeps on canvas. A large painting of his called "The World Flyers" suggested to him when he saw them passing over Portsmouth shows the vast sky with a little water and a small segment of the coast line. On come the flyers in triangular array. The painter has caught the feeling of the infinitude of space, its shear vastness and breadth in an almost breath taking way. "Over Boston Common" and "Blimp" are also sky marines effectively presented. In addition to the paintings from a vantage point looking up, there are a number looking down. These show the earth as it looks to the painter from a plane and are rather a new departure in landscape art. Also, Mr. Woodbury shows several hot, simoon laden pictures of wracked sea and lurid sky

painted in and about the West Indies. Of these "The Gulf Stream," a picture of waste blown, teeming brazen ocean and brassy sky, very reminiscent of a Conrad tale, is the most effective. Mr. Woodbury further shows a group of etchings done with the distinction which marks all of his work.

Prompt on the heels of these notices of exhibitions comes official word from Washington that the House Library Committee has reported favorably on purchasing the painting "Peace," by Walter L. Dean, who studied in the Architectural Department of Technology some time ago. The painting "Peace" shows the "White Squadron" at anchor in Boston harbor in 1891. Twenty-five years ago Mr. Dean loaned the painting to the Washington government and it has been in the Capitol ever since, although he has never received any compensation for it. A bill proposing its purchase was presented in 1900, but it fell into some legislative pigeonhole and was forgotten. Now thirteen years after the painter's death the bill has been exhumed, dusted off, and again presented to the Congress. Since the "White Squadron" was the foundation of the American Navy, it seems to be the general consensus of opinion that the picture should always be kept in Washington.

AN Alumnus of Technology has been the storm center of a recent controversy which seems to have shaken official Philadelphia to the foundations. George H. Shaw, '04, formerly chief of the Division of Housing and Sanitation of the City of Philadelphia, is the cause of the acrimonious discussion.

On February 14 Mr. Shaw handed in his resignation of a post which was both lucrative and desirable in the opportunity it offered for interesting scientific research. The resignation was in response to a request for it on the part of Mayor Kendrick. According to the Philadelphia papers it was Mayor Kendrick's plan to place Mr. Shaw in the Transit Department at a lower salary and fill the vacant post with a real estate dealer who was, quite incidentally, a ward leader of Mayor Kendrick's party faction.

Mr. Shaw, however, complicated the situation by refusing to accept the new position for which he felt he was not fitted. Meanwhile the Mayor, who was spending a short vacation in the South, was deluged with telegrams signed by prominent physicians, business men and social workers of Philadelphia protesting against the removal of Mr. Shaw and the placing in a position of technical responsibility of a man with no scientific experience.

The newspapers have taken up the cudgels in their editorial columns. They pronounce Mr. Shaw to have been a faithful and competent official during his five years in office and deprecate his dismissal as causeless and a reproach to the administration. The outcome is not in sight at this date.

ANOTHER Technology man who has been causing a deal of a stir in newspaper circles is Richard O. Marsh, '05, an explorer whose article on his discovery of the "White Indians" appears in this issue on page 308. His story is veiled in mystery and the newspaper reports are vague and confused, but they furnish a peg from which to leap to a highly interesting conjectural story.

The first recent news of Mr. Marsh was on February 25, when the report went round that the Indians of the San Blas coast of Panama had risen in rebellion and had killed four Panamanians. An unconfirmed dispatch stated that Mr. Marsh had raised the American flag at Carti and had announced that the San Blas territory belonged to Columbia.

Two days later the situation had become more aggravated. Panamanian troops had landed on the coast, but had not advanced, pending negotiations to bring about a readjustment of conditions in the territory. The National Assembly of Panama had declared the district in a state of siege. The Indians were reported bloodthirsty and well armed. There was no further news of Mr. Marsh.

The next day the despatches became less muddled. The State Department at Washington issued official advices that the Indian uprising had assumed general proportions. There was no word concerning Mr. Marsh except that on February 25 a document demanding independence had been sent to the government of Panama by the San Blas Indians. Mr. Marsh was said to have been the English translator and perhaps the author of the paper. It further contained a demand on America to cease refusal of protection to the Indians—to this extent seeming to confirm the previous rumor about the raising of the American flag.

The day the petition was received, the American minister, John Glover South, sailed to investigate. At the same time, R. A. Lamb, Inspector General of the Panama General Police, an American, set forth for the seat of the disturbance, laden with handcuffs, gum shoes and shooting irons, and muttered promises to arrest Mr. Marsh on sight.

The whirlwind has abated, but in the driving away of the dust Mr. Marsh seems to have disappeared. On March 5 an Associated Press despatch announced the settlement of the dispute with a return to the status quo ante on the part of the Indians. As has been said, Mr. Marsh had disappeared. Perhaps Mr. Lamb has carried out his threat and this Technology Alumnus languishes in durance vile. Perhaps he rules the Indians from a high mountain peak. At any rate, for the present, the story must remain a romantic mystery far more pleasing most like than will be the eventual unvarnished truth. Meanwhile, we refer you to another page for "Blond Indians of the Darien Jungle," in which Mr. Marsh set forth the story of his discovery of the White Indians of San Blas.

THE recent mild earthquake on the East Coast, which rattled a few dishes and a great many people, seems to have set off a scientific quick fuse. The learned discussion which has taken place is far too long and too technical to reproduce here. It may, however, be reassuring to those New Englander residents who, by virtue of a migration to Palm Beach, missed the social event of the season to know that no less an authority than Waldemar Lindgren, Head of the Department of Mining, Metallurgy and Geology at the Institute, prophecies more and better quakes in the near future. The last convulsion started in New Hampshire according to Professor Lindgren and the ultimate cause was probably the contraction of the earth's crust due to cooling. We may expect to have similar vibrations in the future, but the substrata of New England are so substantial that none of the quakes should be much more serious in effect than the passing of a really heavy truck through the Back Bay Fens. It is interesting to note that The Review predicted this recent tremor in its issue of February, 1924.

One thing the earthquake brought to light was the paucity of seismographs in this portion of the country. Some of the more ardent spirits around the Institute had practically purchased one with the intention of donation when they consulted Professor Lindgren only to find that these instruments must be founded on rock. Since the Institute grounds are of made land a seis-

Calendar of the Reunion

(See page 313 for detailed story)

THURSDAY JUNE ELEVEN

Morning— Registration: Main Lobby
Noon— Buffet Lunch: Walker Memorial
Afternoon— Departmental Inspections
 President's Tea
Evening— Jamboree Dinner: Boston

FRIDAY JUNE TWELVE

All Day— Harbor Trip
Evening— Tech Night at the Pops

SATURDAY JUNE THIRTEEN &

SUNDAY JUNE FOURTEEN

Class Reunions as arranged

NOTE:—To date of publication 1841 Alumni have indicated that they will attend the Reunion. California, Montana, Kansas, Texas, Florida, Cuba—all are represented.

mograph installed on the Cambridge property would have a daily record sheet resembling a boy's first efforts in carrying out his teacher's instructions on standardized writing.

DURING his recent visit to Panama, President Stratton was the guest of honor on February 13 at a banquet which, to quote the *Star and Herald* of the City of Panama "may mark an epoch in engineering programs as applied to the Republic of Panama and other Latin-American countries."

The dinner was given by the Panama Society of Engineers to President Stratton and Dr. Ambrose Swasey, past-President of the American Society of Mechanical Engineers. The members of the Panama Society are largely from the Sheffield Scientific School and Technology, with the greater number from the Institute. Technology men who sat at the table were W. F. Grimes, Jr., '08, Secretary of the society, S. P. Vecker, '10, Captain H. C. Mabbott, '12, L. W. Parsons, '13, W. H. Smith, '15, Meade Bolton, '16, Lieutenant C. O. Kell, '20, I. F. McIlhenny, '23, and Eduardo Icaza, Jr., '23.

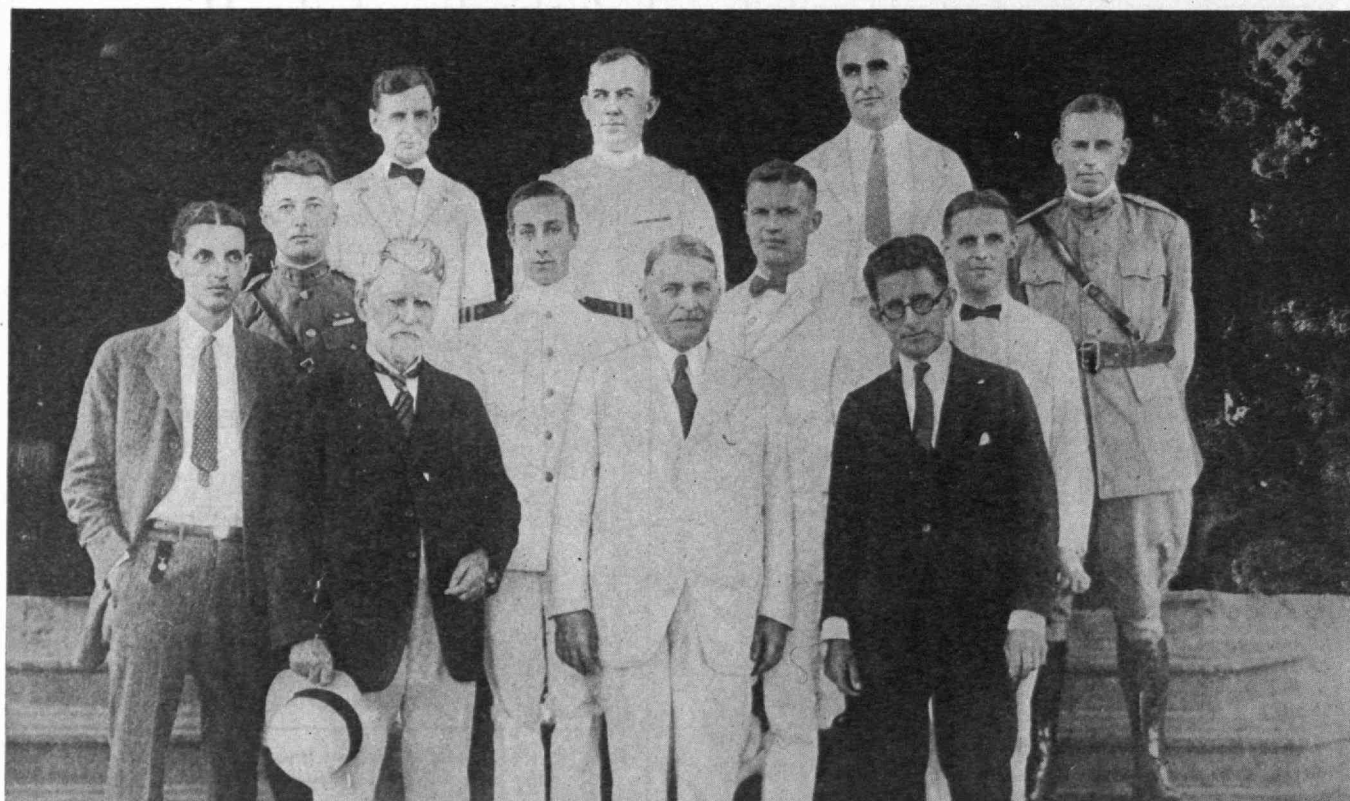
Dr. Stratton took occasion to compliment the engineers of Panama on their possession of one united society with all difficulties eliminated, working as a harmonious whole with the good of the country first in their eyes. He expressed his delight at the progress made by Panama in the past decade. He added that Technology has recognized this progress and has undertaken to consider establishing a course in sugar

technology. He concluded with a call to the young men of Panama to take up their engineering studies in the States as much with the end in view of studying and understanding the temperament of the northerner as with the purpose of increasing their technical abilities.

EDUKATION for the masses proceeds by leaps and bounds. In the van of this movement for the wider dissemination of knowledge may be found a Technology professor. It has long been thought that the radio might be used for more serious things than the purveying of bedtime stories, Democratic conventions, jazz-band concerts and Inauguration ceremonies. Apparently the radio college is now well underway. For some time the University of Pittsburgh has been broadcasting courses in Philosophy and Science in Industry. At the close of the course the lectures are published quite in the approved form of college bulletins.

The courses of KSAC of the University at Kansas have recently received much public notice on account of the appointment of its president to the portfolio of Secretary of Agriculture.

Now station WBZ of Springfield offers its curriculum to the matriculating hearer. Three new courses are to be offered, one in Business Psychology, a second in French and a third in Chief English Writers of Our Day. Any listener with good tubes and honest intentions may enroll. A nominal fee is charged, covering the expenses in connection with giving the course and each registered student will receive literature, syllabuses and other material aid. The lecturer in English is none



DR. STRATTON IN PANAMA
With Dr. Ambrose Swasey (left) and a group of Technology men. See the accompanying story

Courtesy of The Boston Globe

other than our popular Professor Robert E. Rogers of The Review Staff, whose pungent wit will now find a wider field than the close confines of 5-330.

THE list of lecturers and speakers who are of interest to Alumni because of their connection with Technology is so long for the past month as to make it imperative that each be dismissed with entirely inadequate mention. Under the circumstances the only satisfactory way to handle the matter seems to be to present to the reader the roster of the gallant company in the form of a matter-of-fact enumeration:—

February 17, 18—Dr. S. Dushman of the General Electric Company, Schenectady, N. Y., spoke, under the auspices of the Departments of Physics and Electrical Engineering, on "Recent Aspects of Bohr's Theory."

February 26—W. F. Jones, '09, Assistant Professor of Geology, addressed the Rotary Club of Melrose, Massachusetts, on the topic "Mother Earth and Its Peculiarities."

February 26—R. E. Rogers, Associate Professor of English, spoke to the Woman's Club of Hingham, Massachusetts, on "Living English Writers."

February 27—W. R. Whitney, '90, non-resident Professor of Chemical Research, Director of the Research Laboratories of the General Electric Company, gave the Fourth Aldred Lecture of the year.

February 27—John Dewey, Professor of Philosophy at Columbia University, and brother of Professor Davis R. Dewey, lectured under the auspices of the Department of English, on "A Working Philosophy for the Modern Man."

March 10—A. W. Rowe, '01, spoke at the University Club of Boston on "Amateur Athletics."

March 10, 11—R. E. Doherty of the General Electric Company, Schenectady, N. Y., gave two talks under the auspices of the Departments of Electrical Engineering and of Physics. The subject of the first was "Graphical Determination of Magnetic Fields" and of the second "Solution of Electro-Magnetic Systems."

March 11—Frederick G. Keyes, Professor of Chemistry, Head of the Department of Chemistry and Director of the Research Laboratory of Physical Chemistry at the Institute, gave a public lecture at Brown University under the John Appleton Fund. His subject was "Equilibrium in Non-Perfect Gases."

March 11—Edward McKernon, Superintendent of the Eastern Division of the Associated Press, and Edward E. Whiting, editor of Whiting's Column in the *Boston Herald*, addressed the Annual Dinner of *The Tech*.

March 12—Mr. Whiting addressed the Freshman Class of Technology on "Newspapers."

MANY who have been students at Technology during the last three decades will be pleased to hear that Leonard Magruder Passano, Associate Pro-

fessor of Mathematics, is this year's winner of the annual prize song competition. Professor Passano is a familiar figure to nearly every undergraduate with his herbarium, his sneakers, his corn-cob pipe and his gentle but cheerfully surprised "Bless my soul." He joined the Institute Faculty immediately after graduating at Johns Hopkins University thirty-three years ago. He has written many songs, one of them, "Technology" having been printed in *The Review* in 1906.

The present song, "The Courts of M. I. T.", is to have the same music as the Stein Song. Some objection has been raised to the latter on the score that it was not in every sense a Technology song. The music, to be sure, was written by Frederick Field Bullard, '87, but the words were written by Richard Hovey, a Dartmouth man, and are not particularly characteristic of Technology as exclusive to any other college. Professor Passano feels that despite considerable sentiment to the contrary, Technology has local color and an atmosphere all its own and it is this which he has tried to incorporate in the present lyric.

The prize of \$200 is given annually for five years. It is the outgrowth of dissatisfaction with the character of the songs at present existing and a feeling that the New Technology needs a new song. This new song is to be chosen from the five prize winners if agreeable to all. The committee in charge of the award consists of H. G. Pearson, Professor of English, D. G. Robbins, '07, A. W. Rowe, '01, and four seniors. The prize was won in 1923 by George E. Russell, '00, Professor of Hydraulics, and the year before by A. E. Hatch, '91.

SIX, including the Chairman, of the twenty-seven members of the Engineering Board of Review of the Sanitary District of Chicago on the "Lake Lowering Controversy and Program of Remedial Measures," are Technology Alumni, as may be learned from the report of the Board published in December, 1924. The chairman is George W. Fuller, '90; the others are John R. Freeman, '76; Frederick H. Newell, '85; Morris Knowles, '91; John H. Gregory, '95; and Wilford W. DeBerard, '01.

The Board has been studying the past procedure and the proposed future program of the Sanitary District of Chicago and presented its report to the Board of Trustees of the District late last December. It finds that contrary to popular impression the Chicago Drainage Canal is responsible for but a small fraction of the reduced levels in the Great Lakes—a lowering that has damaged navigation and harbor works. It says, "The Chicago diversion has lowered the Great Lakes about five inches, while diversions elsewhere, improvements of outlet channels, and climatic conditions, have caused a lowering of two to three feet."

The Chicago Drainage Canal was provided for by an Act of the Illinois Legislature in 1889, which created

the Sanitary District of Chicago. The canal, which was opened in 1900, "reversed the flow of the Chicago River, diverting Chicago's sewage from Lake Michigan; improved the city's only source of water supply; ebbed severe waterborne epidemics; provided one of the chief links in a waterway from the Great Lakes to the Gulf, a project long promoted by the National and State Governments; led to a remarkable development of the bathing beaches, and incidentally supplied power for public needs."

THE attendance at previous "Open House Nights" has clearly evidenced the interest that the public has in the activities of the Institute. Fostering this spirit, Technology strives to enhance it, and to this end it will again open its buildings for public inspection on the evening of April 16. Visitors will be guided through the various departments where demonstrations will be given by members of the staff and students. The many recent additions to equipment will be of especial interest to those who are already familiar with the Institute.

ORVILLE B. DENISON, '11, Secretary-Treasurer of the Alumni Association announces the following tentative schedule for a trip to local clubs in cities enumerated below, lasting from March 20 to April 12. It will be completed by the time this issue of *The Review* reaches its readers:—

New York, March 20-21; Pittsburg, March 22-24; Dayton, March 25; Cincinnati, March 26-27; Indianapolis, March 28; St. Louis, March 29-30; Chicago, March 30-April 1; Akron, April 2; Cleveland, April 3-4; Detroit, April 5-7; Buffalo, April 8; Niagara Falls, April 9; Rochester, April 10; Boston, April 11.

IN revival of a practise some time ago discontinued, *The Review* will commence, next month, the semi-annual publication of a bibliography of members of the Institute's Faculty, Instructing Staff, and alumni body. Extended notices of new volumes will not be printed, but to the end that the concise record may be made inclusive as well, *The Review* solicits from its readers any information they have on publication of books or magazine articles later than April, 1924. The new section will be titled "Bibliography," and will appear in the May and December issues just before the section "News from the Alumni Clubs."

Editorial Comment

Three-fifths of the way along the thorny path at the end of which we are told lies a new Alma Mater song for the **"The Courts of M. I. T."** Institute, the Prize Song Committee has had the relative good fortune to come upon "The Courts of M. I. T.," and has awarded it the first prize of the year. This offering of Professor Leonard M. Passano, of the Department of Mathe-

matics, is in our opinion on a plane substantially higher than its predecessors, and renews the hope, grown a bit dim as time has worn on, that there is something eventually to be gained by the contest begun in 1921.

Obviously right minded, we think, was Professor Passano's decision not to attempt a new musical setting for his song. The music of Frederick Bullard, '87, is not likely to be bettered for the purpose of a rousing glee, and it is this inspiring chant to which our amiable professor of mathematics has set new words. Few persons, even though they may know every interval of *The Stein Song*, Barney McGee and *The Winter Song*, think of their composer as an alumnus of this Institute, and the suggestion that Technology surrender to this ignorance and give up the music of *The Stein Song* because Richard Hovey, a Dartmouth graduate, wrote words to it, has always seemed to us more than a little absurd. Granting for the moment that a change was desirable, the sensible course was to leave well enough music alone, and brave the terrifying difficulties of incorporating the Institute's name into a new set of words to match it.

Professor Passano's offering seems thus a step in the right direction. His belief that the Institute possesses an individuality, a texture, a color vivid enough in its own right to permit plausible poetry is more than once borne out by the new verses.

"When the long years have departed
And our sons and grandsons reign
We'll be dead but not downhearted
We'll come marching back again"—

this quatrain strikes us as a nice epitome of that curious cynical affection with which so many former students regard their stern Alma Mater, and which makes "We are happy: Tech is hell" a unique logical and expressive college cheer. Not so happy, we think, is a verse like

"And the crowned dome watching over
The Great Court in its sleep
Sees departed leaders hover
And faithful vigil keep."—

wherein the author seeks after a romanticism a bit foreign to the locale. But there was wisdom also in his preservation of more than one of Hovey's phrases. The "fair weather" and the "good fellows get together" would be hard to dissociate from Bullard's music, and it is well that Professor Passano did not attempt the divorce.

The decision, of course, whether Professor Passano's song, or any other, will ever supplant the *Stein Song* rests not with any committee but with students and Alumni who will decide whether they will sing it, or no. All in all, however, the latest offering is something which, if measurably less than ideal, is still an indication that the total of one thousand dollars so lavishly offered in 1921, will not turn out to have been wasted utterly. Something, in other words, to be thankful for.

Backgrounding the Institute

In which it becomes evident that the Institute is not unmindful of the memorials it owes to its pioneers

In the shabby and, notwithstanding it is Holland, the rather dirty monastic buildings that house the University of Leyden are treasures which make one quite forget the small, stuffy rooms, the dark stairways and the narrow corridors. Those passages are decorated with admirable cartoons, drawn at least a century ago by men afterwards highly distinguished; and in almost every room the walls are covered with portraits, going back to Duns Scotus, of distinguished Dutch and other men who have taught in the University. It is a pictorial "Who's Who" of Holland; and, while some of the portraits are little more than daubs, others are by the greatest painters of that fortunate country. The splendid array of masterful, highly intellectual faces fills one with a sense of the power and greatness of the tiny Netherlands kingdom that could be secured in no other way.

The contrast between the cramped, meagrely furnished and ill-lighted University of Leyden and the magnificent buildings of the Institute of Technology is very striking indeed. Yet that galaxy of portraits makes extraordinarily vivid the fact that the inadequate buildings in Leyden have housed for centuries some of the best brains of Europe, and that in those unventilated rooms is a residuum of history which makes the magnificent halls of any American university seem *parvenu* indeed.

It is said that Bostonians spend more time in extolling the virtues of their great-grandfathers than in making of themselves the kinds of great-grandfather that their great-grandsons will, in turn, admire. Whether this be true or not, the creation of a worthy, present-day great-grandfather needs, as an essential factor, a substantial background—some well lighted back-drop against which actors in the foreground may be set off. Especially does an institution like Technology, which deals so largely with material things, require unceasing reminder that the marvelous material successes of the United States are largely based upon those solid qualities of mental culture, those high aspirations of the spirit, for which New England men and women of our almost three centuries of history have been so justly revered.

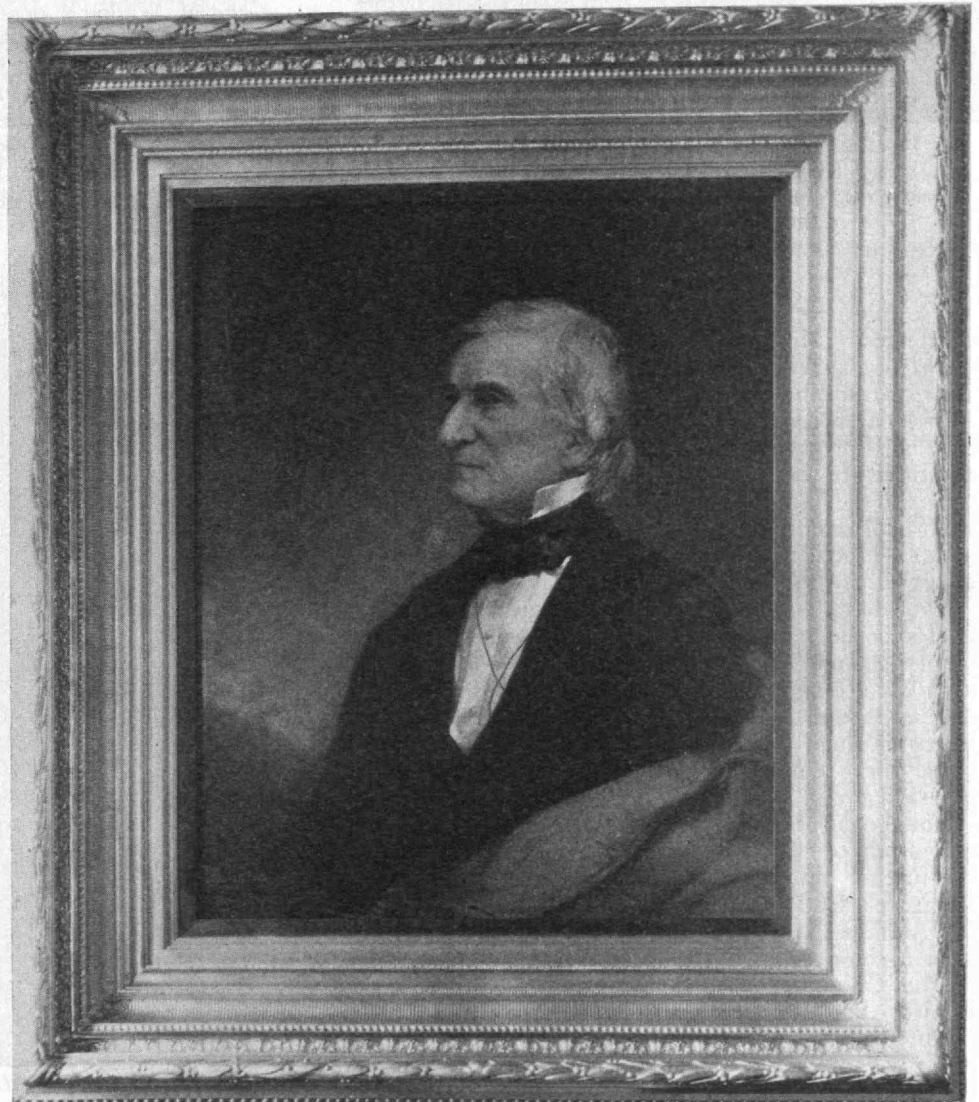
Consequently, having,

By JAMES PHINNEY MUNROE, '82
Chairman, Committee on Historical Collection

through the generosity of many men and through the hard work of many others, built up a solid institution

with an international reputation, it is time for the Institute to begin to take reckoning of its incalculable debts to its builders and, out of a visible enumeration of those obligations, to create for the youth of the present years, and of the years to come, a background which shall be both an acknowledgment of the Institute's obligation to the past and an inspiration for its far greater work in the future. Furthermore, by American standards at least, the Institute is no longer young. Almost exactly sixty years ago, on February 20, 1865, President Rogers wrote in his diary: "Organized the school! Fifteen pupils entered. May not this prove a memorable day!"

It is true that, even had it geniuses to do it, the decorating of the endless corridors of Technology with impromptu cartoons would be little short of scandalous. Such desecration of those long, smooth spaces would be



WILLIAM BARTON ROGERS
1804-1882

Founder and First President

*The portrait painted by Lazarus and lent the Institute by the First President's niece,
Mrs. Charles F. Russell*



ROBERT HALLOWELL RICHARDS, '68
1844—

*Head of the Department of Mining and Metallurgy, 1873-1914
A Founder and First President of the
Alumni Association*

worse than the scratching of matches and the stubs of cigarettes. Moreover, cartoons by Holbein himself could not survive many years in the careless, iconoclastic atmosphere of these superbusy United States.

Even archives mean little, as yet, to most Americans. The need of gathering historical memorials concerning the Institute was emphasized by the startling discovery that, in the removal across the Charles, many of its early documents seem totally to have disappeared. Their symbolic transference upon the historic (and most unseaworthy) *Bucentaur* at the dedication in 1916, turns out to have been purely fictitious, and the treasure chests borne by antique halberdiers were indeed but empty shams. It is to be hoped that some of these archives are simply mislaid in the endless rooms and closets of the institution; but the fact that probably many of them have irreparably disappeared, gives to those that remain, like the Sibylline books, an immensely added worth.

For the purpose of gathering and preserving whatever memorials of the early days may still remain, and for the further object of getting together portraits of the Institute's leaders in its sixty years of corporate life, the Alumni Council has created a Committee on Historic Memorials with which the Executive Committee of the Corporation and the Art Committee of the Institute are cordially coöperating.

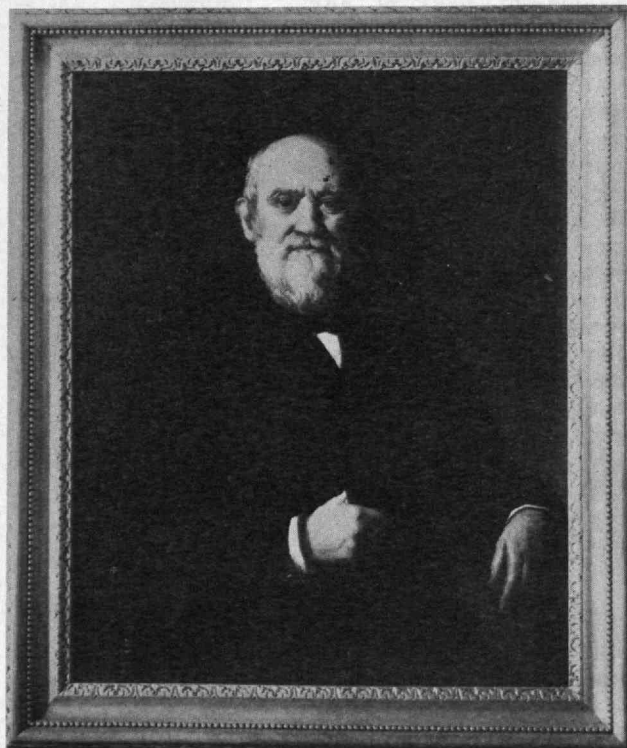
Obviously, one of the first things to be done was to bring together such portraits as existed, or as could be secured by gift, and to place them in the Walker Memorial. There they will be seen almost daily by all the undergraduates and their presence cannot fail to have a good effect through creating, in the subconsciousness of modern, self-sufficient youth, an under-

standing that the Institute did not begin with, and will not end with, them. Fortunately, friends of the Institute, including Edwin Blashfield, '69, decided to place across the end of the great hall of the Walker Memorial the beautiful mural decoration which adds so markedly to its dignity. Moreover, as in the case of the consistent mother who must dress her children to match her recently acquired Louis Quatorze sideboard, the hall had to be entirely redecorated to harmonize with the mural painting. Out of this renovation was evolved an admirable series of panels between the windows, and in those spaces have been placed the portraits thus far brought together, each portrait being individually illuminated by concealed light. The total effect is admirable.

The present arrangement of portraits in the central hall is in a way temporary, since, in order to fill the spaces, some pictures that belong in other rooms have had to be brought in. As new portraits are acquired, some of these sojourners will be retired to their original places in the smaller rooms of the Memorial.

Dominating the hall is a portrait, by Churchill, of President Walker to whom, of course, the building as a whole is dedicated. This portrait, painted after General Walker's death, is based upon an excellent photograph of him taken at the St. Botolph Club in the later years of his presidency of that organization. Moreover, facing one as he comes into the Memorial building, is Daniel Chester French's admirable bust of Walker acquired in 1897 through the generous gifts of undergraduates. Mr. French was not only a personal friend of President Walker's; he is also an M. I. T. man of the Class of '71.

Another Technology President whose portrait is in



WILLIAM ENDICOTT
1826-1914

*Member of the Corporation, 1865-1914
Treasurer, 1866-1872*

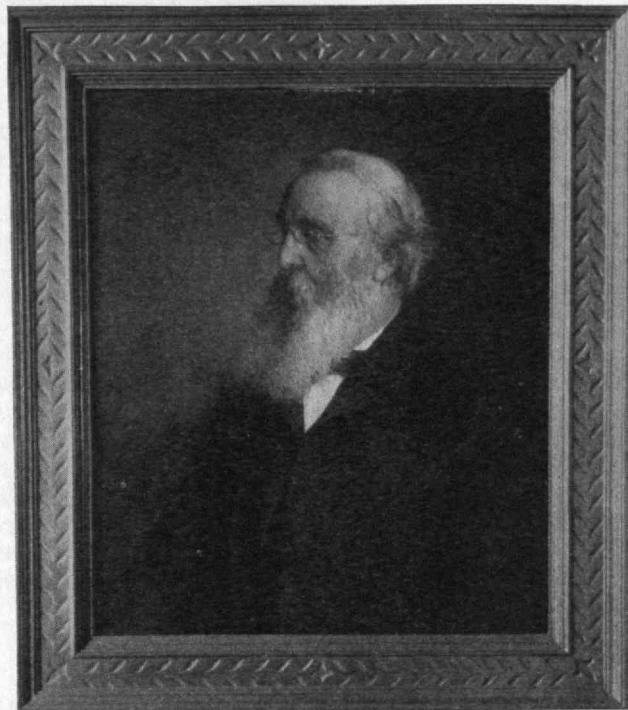
*The portrait painted by L. P. Thompson, and given by
William Endicott, Jr.*

the great hall, is William Barton Rogers, Founder and First President of the Institute. So far as known, this is the only painting of him in existence and was the work of Lazarus. It is lent to the Institute by President Rogers' niece, Mrs. Charles F. Russell, daughter of the distinguished geologist, Dr. Henry D. Rogers.

In connection with President Rogers' portrait, the Committee had an amusing experience. There was sent to the Institute, for purchase, a striking portrait of a young man of thirty, with coal-black hair worn long and having the features of the first President. It was labeled, furthermore, with a worn brass plate, "William Barton Rogers," etc. It was difficult to convince the picture dealer that, at the date noted on this portrait, President Rogers was much older than the subject and that, many years before, his hair had turned snow-white. Possibly this alleged portrait of Rogers was really of Ralph Waldo Emerson — the resemblance between those two eminent Americans, one from Virginia and the other from Massachusetts, having been most extraordinary.

A third presidential portrait in the hall is of Dr. John Daniel Runkle, long senior professor of mathematics, and President from 1870 to 1878. This was painted by Joseph deCamp and was secured by gifts from Dr. Runkle's associates and friends. To those who remember him, the picture preserves most faithfully the outstanding qualities of the stern and genial, the feared and beloved — in his case not contradictory adjectives — presiding genius of old "Rogers 22."

The remaining presidential portrait thus far acquired is of Dr. Henry Smith Pritchett, in office from 1900 to 1907. This portrait fails to do proper justice to Presi-



JOHN DANIEL RUNKLE

1822-1902

Charter member of the Corporation

Professor of Mathematics, 1865-1902

Acting President, 1868-1870

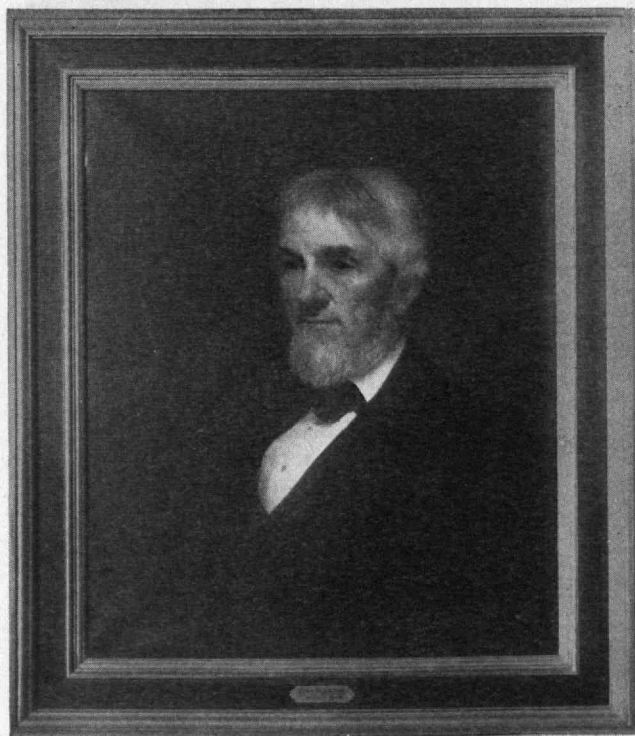
The portrait painted by Joseph deCamp

dent Pritchett and it is hoped that it may some time be supplanted by one more satisfactory.

There remain to be procured for the central hall portraits of President Crafts (1897-1900) of President Nichols (1921) and of President MacLaurin (1909-1920). Through certain generous gifts a likeness of Dr. MacLaurin is practically certain to be acquired within a comparatively short time, and it is hoped that ways will be found of securing the other two.

As for the present distinguished incumbent of the office, it is humbly suggested that a portrait made from the subject is always much more satisfactory than one created from a photograph. He is far too modest to have such a portrait, were it painted, placed upon public exhibition; but it could adorn the walls of the President's house until that, we fervently hope, far distant time where it can properly be transferred to the walls of the Walker Memorial.

The Institute was not the creation of its Presidents alone, eminent as they have been and distinguished as were their services. Of almost equal importance were the labors of some of the other officials of the Institute and of many of her great professors. Two treasurers, particularly, stand out as having been essential factors in carrying the Institute through its dark days of almost abject poverty. The first of these was John Cummings who, by pledging his personal credit, saved the Institute from bankruptcy; and the second was William Endicott, who was President Walker's right-hand man in acquiring the funds so desperately needed in the 1880's to develop the Institute from a feeble, poverty-stricken, largely local school into the powerful international institution that it is today. On the walls of the great hall will be found a portrait of John Cummings, painted by Vinton and given to the Institute by Mr. Cummings' widow; and a copy of a portrait,



JOHN CUMMINGS

1812-1898

Treasurer, 1872-1889

"At the period of the Institute's greatest financial stress, he averted disaster by placing his personal credit at the service of the school"

The portrait painted by Frederick P. Vinton, and given by Mrs. Cummings

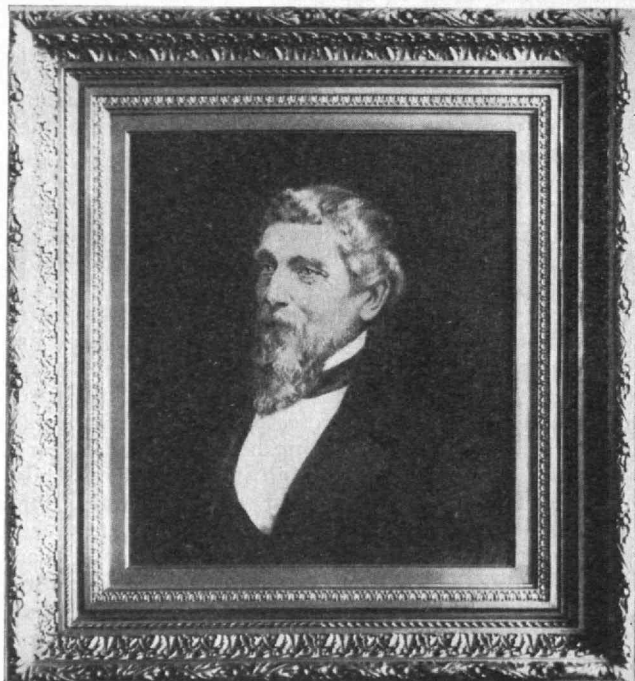


WILLIAM JOHNSON WALKER
1789-1865

"In sympathy with the ideals of its founder, he was the first large benefactor of the Institute and at the time of greatest need"
The portrait painted by Henry C. Pratt, in 1866

also by Vinton, of William Endicott, presented by Mr. Endicott's son, also William, and a life member of the Corporation.

Other portraits at present hanging in the central spaces of Walker Memorial are an excellent one of Professor William Thompson Sedgwick, painted by Churchill, this portrait having been given to the Insti-



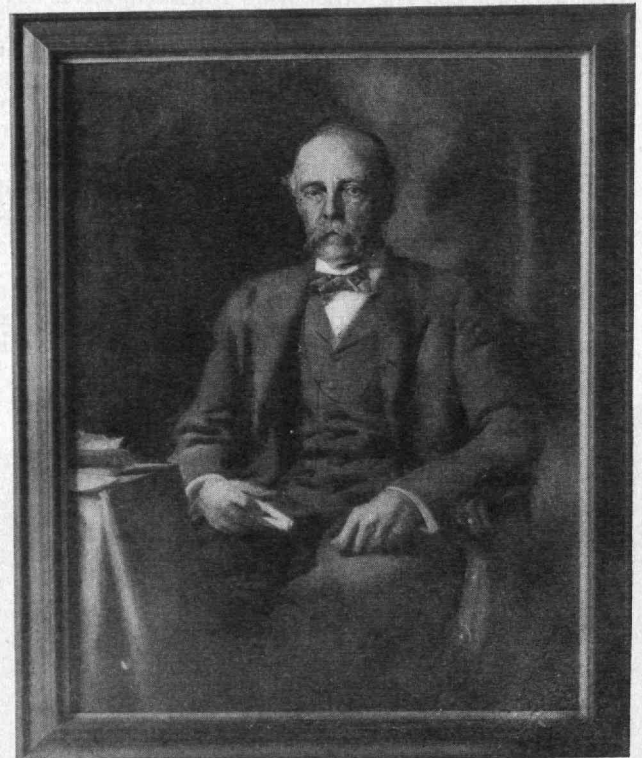
RICHARD PERKINS

"A loyal friend to the Institute, whose bequest is a perpetual source of aid for ambitious students"
The portrait painted by S. M. Norton

tute on the twenty-fifth anniversary of Sedgwick's receiving his doctorate at Johns Hopkins; a likeness of Professor Robert Hallowell Richards, emeritus Professor of Mining Engineering, one of the early secretaries of the Faculty, and beloved, as was Sedgwick too, of all earlier Tech men; a picture, in the antique manner, of Dr. William Walker whose timely gift of one hundred thousand dollars rescued the Institute's perishing charter far back in 1861; and a portrait of Richard Perkins who, by a generous bequest, made possible the highly useful Perkins scholarships.

Symmetry will soon be achieved by the placing of a portrait of Augustus Lowell, one of the earliest and most devoted friends of the Institute, this picture being the gift of his son, President Abbot Lawrence Lowell, of Harvard University.

To complete the present viewing of Technology portraits, one must go from the great hall of the Walker Memorial to the central library of the Institute up



AUGUSTUS LOWELL
1830-1900

"Warm friend, wise counsellor, constant and liberal benefactor"
The portrait given by A. Lawrence Lowell
[Not yet in position]

under the dome. Here, will be found a copy of Humberts' portrait of Mr. Theodore N. Vail, done by Alexander James; a likeness, by Chester Harding, of Loammi Baldwin, one of the most eminent early engineers of America; and a portrait, recently painted by Horace Burdick of Professor William Ripley Nichols, one of the leading creators, not only of the chemical department, but of the morale of the Institute as a whole. The reason for the placing of these portraits in the Central Library is that in that library is the extensive Vail collection of books on electricity; an interesting assortment of early works on engineering, made by Loammi Baldwin, loaned to the Institute by the Woburn Library; and the Nichols library, chiefly chemical, which was, however, the nucleus of the very

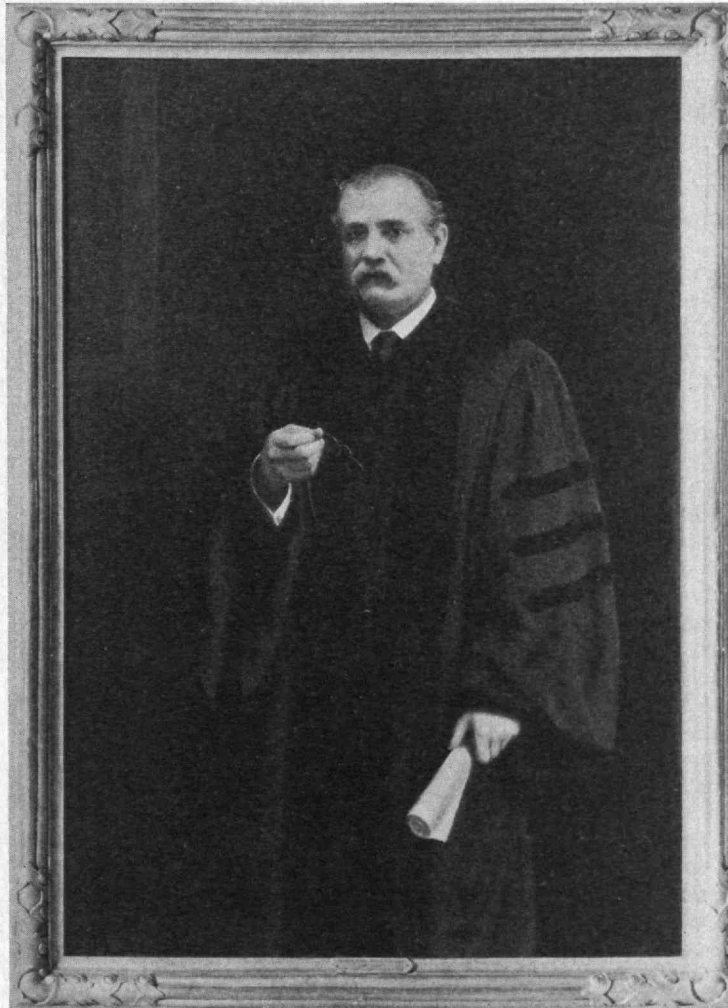
extensive general library of the Institute now housed under the dome. The picture of Mr. Vail was presented to the Institute by the American Telegraph and Telephone Company; that of Loammi Baldwin is a loan from the Engineers' Club of Boston; and the portrait of Professor Nichols was given by William E. Nickerson, of the Class of '74.

Additional pictures — painted and photographed — are scattered around the Institute; but, as yet, they are not "official." Moreover, other portraits of early professors and of at least one active head of a course are under way; but it is obvious that one cannot even refer to gift-horses — much less look them in the mouth — before those desirable animals arrive. Fortunately, the Committee has had to exercise little self-restraint in the matter of mouths with the portraits thus far acquired. Obviously, there are no Copley's and Stuart's among them; but there are some good examples of the work of leading artists of the last half-century; and, with one or two exceptions, the likenesses are excellent, giving the spirit as well as the features of the man depicted. Moreover, in 2025, these pictures will have a value,

both as paintings and as memorials, beyond what we today can possibly conceive.

Realizing this future importance of many things now not greatly regarded, the Committee on Historic Memorials has other plans under way which will be of real service, they believe, to illimitable unborn generations of Tech men. Remembering, however, the wise advice to describe what one is going to do only after it has been well done, an account of these plans must await some measure, at least, of their fulfilment.

This imperfect account should not close without giving joint credit to the Art Committee, the "Memorial Volume" Committee, of which Professor H. W. Tyler was chairman and the Historic Memorials Committee for the dignified World War Memorial cut into the west wall of the main entrance of the Institute. The adequate quotation from one of President Walker's orations: "Only victory remains and a fame forever secure" was sent in to the Historic Memorials Committee, in response to its request, by General Walker's daughters.



FRANCIS AMASA WALKER
1840-1897

Third President, 1881-1897

"Preserver of the Autonomy"

The portrait painted by William Churchill

Aristotle was Right

Thoughts on progress as applied to engineering, first delivered in the form of an Aldred Lecture

Most of those who have spoken in this lecture series have emphasized the importance of common sense in engineering. It is the basis of all good engineering. For present purposes I want to identify common sense with *hive instinct*, a dominant force which directs our actions. We all know that it is not knowledge; knowledge is stock on the shelves of the mind. Common sense determines the way we use it with particular reference to everybody else. Our senses are faculties and powers of perception; common sense might be called the rare sixth. Senses and Knowledge differ in this: we need both, and to improve them we sharpen the one but broaden the other. Common sense may be hereditary and contagious, but knowledge cannot be born in us nor is it in the least infectious. Common sense is each one's share of the accumulated senses or feelings of all. If we call it good judgment, then we recognize its *hive marks*. It is something due to the senses of all the others.

Common sense is the most sensitive factor determining the actions of each of us separately, and it is the criterion which we collectively use to measure everybody. In other words, we get it coming and going. If it makes us act well it reacts to reward us well. Therefore I will preach common sense, but particularly its innate advance, because this, when applied to things, is engineering.

Matters of common sense change with time. The engineer must keep abreast of the times; the researcher ahead of them. Once it was common sense to move about by walking or running. Fool researchers were trying to catch wild elephants for a change, but that wasn't common sense. It later became common sense to tie different animals to boxes and things, or boxes and things onto different animals, and thus to ride. For a short time it was common sense to use horse cars until it became common sense to use electric cars. Once it was common sense to hang tin lanterns in church towers, but not since the engineering of telephones. Anyone may add indefinitely to such common sense changes in material, but the dependable fact remains that material changes in common sense itself do not occur. Common sense, with all its stability, is an unalterably forward force. It is not necessary that everyone should realize the dominating part which change plays in it, but certainly engineers must see it.

What I myself say need not be accepted as correct. It is only one viewpoint. Well intentioned advice has

By W. R. WHITNEY, '90
Non-Resident Professor of Chemical Research

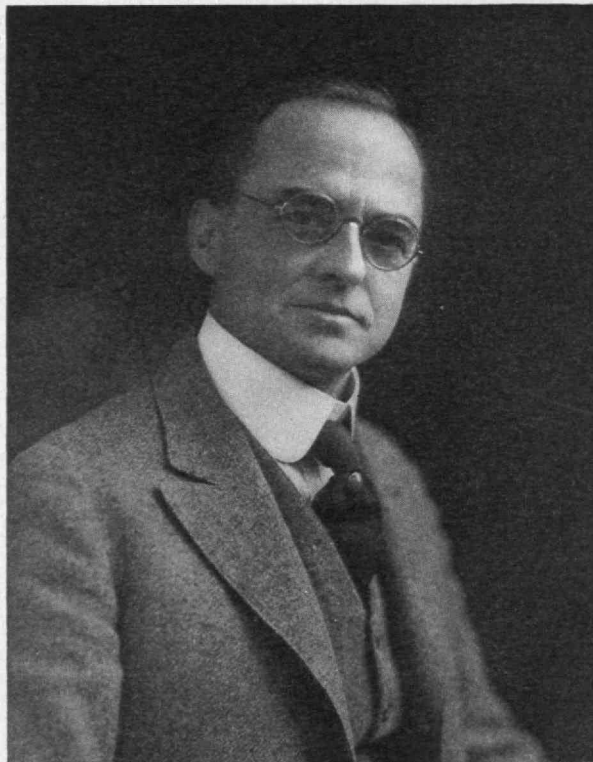
always been handed down from old to young, and every possible combination has probably been played.

The most useful helps are the obvious. I expect to say only the obvious, but I will try new collections of words.

This point of change is really my whole theme. The world gets ahead because men differ. Engineering is forever a series of changes. We can divide them into upward and downward, or good and bad, but steps of both kinds are of utmost importance. We can learn how *not* to build a motor from many false steps, and how to improve a motor from some new step. Perhaps you have not realized how little fixed is the state of engineering. There is no flat curve where rising quality or quantity becomes permanently horizontal. This principle is essential to the very word engineering, and if I can convince you of this I may help you. Practically, every engineer is a pioneer, not a manufacturer. His products are usually novelties, and in any case should differ from former output.

In his earliest history we find man thinking of himself with an idea of change. If indebted to the sun or the gods for existence, he wanted to know how to propitiate them. At the present time he is still studying forces — matter, time, and space — with some idea of propitiation. But his appreciation of creation has always been feeble, and he is apparently not even yet advanced enough to understand it, except in very small part. A state of flux is still the normal human attribute. Growth and change are our main characteristics. There is a lot ahead for us, and most of it is different. The bear and the woodchuck still act like their early ancestors, and when winter comes, they crawl into holes and sleep till spring. They evade impending evils. Man, however, fights against prevailing conditions, but with arms apparently existing for the purpose. He worked to get warm, experimented, and controlled fire. I suppose this hereditary characteristic is the engineering spirit of today. It is what has distinguished man from clams and jellyfish, and explains his dominance instead of the stronger pterodactyls.

If you are in doubt as to our interest in improvement rather than in permanence, or in advance rather than in fixity, read your newspaper. You may learn in a single page that the average life of man has been increased x years by modern medical work. The highest bridge has just been completed — nearly as high as the longest, which was erected last year. A French-



WILLIS RODNEY WHITNEY, '90
Director of Research of the General Electric Company; Term Member of the Institute Corporation; Non-Resident Professor of Chemical Research, and, in these pages, guide, philosopher and friend to the younger engineering generation

man has just made a new speed record for airplanes. The age of man's history has now been put back two hundred thousand years by some anthropologist's researches. The celestial universe has just been extended thousands of light years by a Harvard professor. The deepest oil well has "come in," and the largest steam turbine has started. The helium dirigible is over San Francisco. A new move is made in execution of the Volstead Act. The highest voltage has just been put on a western power line. History is to be better taught in schools, and photographs are being wirelessly around the world. Everybody wants improvement.

In speaking to engineers I wish to confine myself to common sense as applied to engineering, though all fields of human activity return the same answer. We are proceeding, advancing, by research and engineering, and have always been doing so. When we allow ourselves complacently to imagine that change is not forever to be anticipated and sought, we but picture the imaginary Boston finality of which H. G. Wells once jokingly wrote: "The capacity of Boston, it would seem, was just sufficient, but no more than sufficient, to comprehend the whole achievement of the human intellect up, let us say, to the year 1875 A.D. Then an equilibrium was established. At or about that year, Boston filled up."

When I was a Tech student, the street cars were *on* the streets, neither under nor yet over them, and they were all drawn by horses. The spirit of research forced a storage battery car up Boylston Street during my school days, and, later, an electric motor obtained current from wires under the rails. Trolley wires went up later, and still later came down, as subways and elevated were provided. This looks like inefficient changing and unsettled planning, but it really represents our established state. We demand the interest of improvement, and we want to participate in it. The process is healthy and will continue. Someone, seeing the upturned state of New York streets, said "It will be a nice place when it is completed." There is no chance of ever completing it. The proper place for a complete thing seems to be a museum and a glass case. Someone has said, "When we're green we're growing; when we're ripe we're rotten."

As an illustration of the spread and rapidity of growth which follows new facts, look at the X-ray. To the average engineer it still seems scarcely of technical interest. To him it is merely a means of viewing shadows of bones or defects in steel castings. But the use of X-rays is already further developed commercially than were gasoline engines and automobiles when I was at Tech. From the scientific aspect its expansion is enormously greater. It is telling us more about the nature of chemical elements than we gained in centuries. It has coöperated with a few decaying elements in changing all our hard, round atoms into infinitely more minute electrical celestial systems which account for all the material of the universe by their various groupings. Here the laws of heavenly bodies seem to cover all requirements of chemical, physical and electrical facts, and Kepler and Newton are coming into their own.

As you know, I am particularly interested in research, so that doubtless I see more clearly the changes in engineering. I know that good engineering is based on precedents and that safety-first is doctrine for engineers, though not for researchers. I wish, however, to guard you against assuming that engineering is like old shoes into which you step and shuffle along. It is

more like a collection of red hot exclamation and interrogation points, mingled with semicolons but no periods.

I do not think that every student of electrical engineering should be *called* a research man. You may make a better living by being called almost anything else. But if you are not a research man in *fact*, you will probably be a second-rate engineer or third-rate business man, because most A-1 engineers and first-rate business men are really only hobbled research men.

That is why I wish every engineering student were at least half "researcher." Research is finding the stuff. Engineering is applying it. The activities of three-quarters of the electrical students of ten years ago must now be described by terms quite unknown when they graduated. Things change so rapidly that you cannot foreknow even the vocabulary of your ultimate calling. Many of those engineering students are now a useful part of that new thing, the well organized public service corporation. They are planning, installing, operating, or distributing current from apparatus most of which is relatively novel. They studied the reciprocating engine at Tech, but they are using a steam turbine. Existing kilowatt capacities and the simple engine constructions were unforeseen when they were here. Others are at work on countless advances in communication and transportation. A large number are continuing habits they learned at Tech, and applying knowledge which they acquired more recently. The problems of automatic telephone exchanges, for example, are relatively new. A large number are giving all their energies to the myriad schemes in which vacuum tubes, coupled circuits, reactances and capacitances now supply new wants in wireless.

Seven out of every eight men of the past three graduating classes have followed their profession of electrical engineering, so that most of you need worry more about how you will do it than what you may do. Aim to deal largely with rapidly changing forces instead of desk-stabilities. This need is not commonly recognized by young graduates, but it was already clear two thousand years ago. Aristotle had the right idea. Change is everywhere in progress. Everything, from living plants and animals to geological formations and celestial bodies, continually adapts itself to its environment. All things seek an ever fresh equilibrium. Engineers, for the sake of human happiness, continually alter and forever disturb static equilibria. There will never be a stable state, and engineers live that the state of living may be eternally improved.

The standard tools of engineering are shown you in school. They are necessary, and none can be safely neglected. From pure mathematics to the facts you get in complicated armature windings, from the mere memorized data on K lines of spectra to K lines of switches, from Alpha rays to delta connections, even to omega oil — all are useful. But if all your acquirements are inventoried in Tech's curriculum, you haven't made a good start yet. As I look back over twenty-five years, in which I have known countless good electrical engineers and in which I have worked with hundreds of research men, I plainly see that an immense stock of knowledge is not the main criterion of quality and service, nor is it like paid-up insurance. I don't pretend to describe exactly life's most important attributes, but they are in feelings of the hive somewhere, and they constitute common sense. Marcus Aurelius said, "What is not good for the swarm is not

good for the bee." Sometime psychological research may establish a useful moral philosophy, but I do not know that this sixth sense, "common sense," can even then be grafted onto the other five by technical schools. I am not even sure that moral philosophy covers the thing. Most laymen hesitate to touch this subject. It is left to professionals (preachers), of whom too much is expected. Huxley saw clearly when he said that the great ends of education are *increase* of knowledge (not storage, nor even transmission) and the *development* of right and hatred of wrong. Some of you may excel in every part of your work, from Einstein mathematics to engineered class cheering, but, because of personal defects, you will have to get along in spite of other people rather than by their help. Your own hive instinct fails, so pray for gregariousness. I think it's up to you what your success becomes. Your own mentalities are mostly what will limit you; your own will or unwillingness to take hold and hold on. Common sense, or the total hive instinct, is wonderfully or terribly discriminating, as the case may be. There are countless engineering openings of ordinary type. Probably no graduate will be without a start in his preferred field within a year. But how far will you go? I find that there are relatively *more* openings high up in engineering than at the bottom. I have known for years of colleges, research laboratories and engineering organizations which seek in vain for especially able men. What's the rub?

Having consulted Tech engineers as to just how I might help you most today, I make this less of a sermon than I had originally written and much more of a confession than I would naturally have chosen. Perhaps it is only a spot or two in most men's affairs that are worth analysis. There are so many men! And so I am going to analyze my own efforts and my experiences, both in employing and being employed. Good newspaper writers insist on the personal or human touch, and want to photograph you, even in your bath, and as they are the experts there may be something in what they say.

During my high school vacations my father gave me jobs in his chair factory. He was proud of his buildings, his Corliss engine, and of his factory output. He always began his day in the works when the morning whistle blew. He enjoyed going on the road to buy hardwood logs. He took his vacation by going out on the road again to sell finished chairs. He was always interested, but it was not solely in the money return. It seemed rather some creative urge. Of course it was common sense and hive instinct. I learned sawing hardwood bolts, turning spindles, gluing seats, steaming and bending chair backs, painting, decorating, and packing for shipment. I went out into the woods to take part in the purchase of lumber, and I once tried to sell a bill of goods. I was fairly industrious, and was jacked up only once. Then a fine, big Swede, the foreman, knocked my arm out from under me when I was leaning with one hand on the bench, pulling slabs from a buzz saw. I remember he simply told me that I couldn't do work that way. But nothing ever succeeded in making me take a real human interest in chair making. It was not my baby. The point I wish to make is that, in spite of a possible hope on the part of my father that I might follow in his footsteps and enjoy what he called business, that particular business never got under my skin at all. I was not then conscious that I wanted to take interest in anything. Deep interest in one's profession need

not arrive before graduation. If you must worry, then worry hard about your present human qualities, not your engineering future. A steady force, call it the hive need, the public demand, the social flexibility, or the persistent newness of every day, continually and instantaneously acts to re-test and calibrate young men. I don't believe a man just suddenly decides to take interest in something and then revolutionizes an industry and lives happily ever after. He grows continually and gets along or fails because the crowd gives him a push or a pull for every smallest move he makes. It makes him feel interested and rewards him when he's playing right, but otherwise discourages him. There is something in what we'll call hive mechanics which puts a premium on appropriate individuality and encourages interest.

Interest has a peculiar pedigree. It is hard to breed it. It is not solely the result of external forces. It seems an internal sprouting seeded by all the other folks. Although I never thought of taking interest in chairs, it was no sign that I could not take interest in trade. At twelve I had established a scrap metal and bone-collecting business, and I took pride in hiring boys to work for me. I toted a wheelbarrow miles in order to dig up the bones of some old cow. My commerce grew, and I became an independent monarch when my purchaser began to send wagons for my products and carry them direct to the freight cars. I was doing big business. I don't think it was money I wanted, for my parents always gave me what I wanted. It was some kind of egotism, but I call it a hive trend towards improvement long inbred in men, but not clear to individuals. Certainly I did not leave the swimming hole and excavate smelly skeletons just to help the fertilizer trust, and I never gave a thought to the poor farmer who wanted ground bone, though I helped both. Some spirit of the hive, reaching from one person to another, makes us eager to contribute in kind.

But merely because I am giving you barnyard illustrations, don't get the impression that the concentrated knowledge acquired in your courses here is in any sense unnecessary. It is nearly the irreducible minimum of the indispensable. Fool notions that common sense is merely the use of common knowledge account for the fact that during the war over a hundred thousand patriotic individuals wasted their time and money on useless inventions. Not a tenth of one per cent of the product was worth a trial. Common knowledge was plentiful. What was needed is not so easily obtained. Common sense must be coupled with uncommon knowledge to make good engineers, and there is no period when your stock of the uncommon can be acquired so rapidly as when it is fed to you at school. Everything I studied at Tech seemed terribly hard, but it was desirable. I had to work all the time in order to keep up, but that very fact probably fixed a trace of the grind in me for which I have always been truly thankful. It seems as though I have made use of every bit of knowledge I acquired here, and some of it repeatedly.

Having started sprinkling personal history through this talk, I ought to cover, at least by title, the industrial research portion, which is the longest part of a happy life. It seems to me it contains the same factors I've already tried to make clear. (These are the other folks.) We ourselves may be high voltage reactors, conductors or capacities, but we must not be insulated. A man seldom seems capable enough to do much alone. He depends on contributions from others.

When the General Electric Company offered me its unparalleled opening for engineering research, I consulted Professor Elihu Thomson at Lynn. I had known him well as a helpful associate in the establishment of the North-Eastern Section of the American Chemical Society. Would he advise me to go to Schenectady? The weighty part of his answer was the men who were there. To be close to Steinmetz, for example, was a very prominent factor. I had been picturing myself a lonely chemist in a soulless factory, trying to analyze the accumulated electro-mechanical impossibilities of half a century. My academic eye saw long hours, long days, and long years of submergence. Would I, a free moral agent, lose freedom, morals, and individuality in the big crowd? Many fellows ask exactly that question today. Possibly the big crowd and the big opportunity can meet us more nearly as we deserve than the little ones can. Having consulted an expert (Professor Thomson), I acted on his advice.

Steinmetz made my introduction into industry seem almost like the entrance into a huge and continuing family picnic. I had to work hard to make it seem like work at all. What most people call work, Steinmetz made just interesting play. I enjoyed every minute. Even continual worries changed their shapes. I soon saw that alone I was too feeble. As always before, I wanted help. The main thing was that I sought the right kind and got it. Helps like W. D. Coolidge, '96, and Irving Langmuir have become electrical household words. I don't know how many men there are helping in our Research Laboratory now, but there are probably about 300. I never let anyone tell me exactly, because the integrated responsibility scares me. In differentiated form I can stand it better.

My experience with assistants and associates has been always the same. Good men apparently do equally well whatever they do, and cannot be kept down, while second class men also usually run true to form and can hardly be helped up.

I want to say a word about salaries. Don't push that question much harder than you push the job. Of course you ought to be interested in your rate. Most people are. But the persons who usually determine salaries are also just regular human beings, and their systems are man-made. They often search in vain for signs of earning power. They will probably go almost as far and as fast with your salary as is usual for employees of comparable training and utility, for they know the value of encouragement. They also know what other people pay for equivalent service, and they have a good-will and reputation to preserve. Some such consideration may carry you beyond the point where the boss really ceases to wonder whether you are a reliability or just a real liability. When he is certain, and when you are, you should try, but then you probably won't have to beg, for suitable recognition. I am advising you on the basis of my own limited experience, and, as I said at the beginning, you need not adopt my suggestions. When I worked at Tech for \$75 a month, the president declined to consider my earnest request for an increase to \$100. I never again troubled anyone for a raise in pay until the President of the General Electric Company asked me to think it over. My testimony is therefore narrow, possibly even irrelevant. I felt meaner for apparently trying to rob Tech of \$25 than I've felt at any time since. I think I'll leave this matter as follows: if, on properly placing a gentle hint that you would appreciate an early increase, you get no satisfaction, seek new work, there or

elsewhere, before your dissatisfaction, and possibly your incompetence, or your boss's, becomes a habit.

Good engineers, as I see them, differ from poor ones not only in being rarer, but in being always interested and interesting. There are other words for this difference, and I'd like to help you by making this point clear. If I may use some loose English; good engineers never seem to bend nor to seek "cinches." Poor ones always seem more present bodily than mentally. Some of you next year are pretty sure to "sag." You will find some "snap" admittedly greatly below your training and ability, and, while waiting for something to turn up, you will spread the morning paper on your desk, and soon pass out of real engineering, perhaps to sell gasoline or California grapes. In a world where individual interest and activity are so highly appreciated, there is no bonus for pure passivity. I have ample evidence from previous classes that some of you will be very successful. Most of you *can* be successful if you will use common sense combined with the uncommon knowledge you can acquire here. The successful engineer as I have seen him has usually been an animated person. He differed from others in one thing; he had some bug which he, in particular, must dissect. His mind has carefully worm-eyed something which everybody else had been bird-eying. Then he did something.

I do not want to separate research from engineering, but, keeping them connected, show you that what we call research is just about what any interested engineer may be doing. We use the word in practice more particularly when we organize for research and need to distinguish engineering. But I cannot leave you with the idea that it is just like other work. To me it seems the greatest sport, and work is no name for it. I feel that it would be taking myself too seriously to tell exactly how I see it, but this is an unusual occasion, and perhaps I can give you some picture without filling the frame with my own face.

So I will sketch engineering as work and research as sport. A good engineer should reverse this. Between these two callings is a great gulf fixed, and it is full of half-trained engineers, unhappy and unsuccessful inventors, and untrained researchers.

The ideal research man is an inquisitive child of nature, a naturalist. He uses ignorance and unknown stuff to find non-existent human wishes. The engineer is using a finite number of tested laws and substances. All history may be his inventory, but if he flies he must keep both eyes on the ground. The researcher, with an infinite actual stock, sees an unlimited, interesting unexplored territory. He wants to test new laws, produce new materials, and find and satisfy previously unexpected human wants. He can keep but one eye on the ground, the other he shuts against failures or opens to the sky.

We all have the sporting instinct. We like a good game. Where is there a game with goals such as you may win with research and engineering? Good service to recognized human needs is usually rewarded in the hive-tokens of wealth, but that is only the subsidiary, not the necessary, criterion of happiness. Most pioneers seem to enjoy life as a healthy sport. Whether they foresee the value of their work or not, they don't need to be continually cashing in. They are rich because they hold nature's notes. If you read the lives of men like Pasteur, Faraday, Darwin, Watt, Kelvin, Edison and Steinmetz you will see that to have an intense interest and follow it is a game than which there is no greater.

Blond Indians of the Darien Jungle

An abridged account of how a Technology man made the startling and puzzling discovery so widely heralded

[Copyright 1925 by Doubleday, Page & Co.]

Two years ago, in the jungle of Darien, at a little frontier settlement named Yavisa, I was bargaining with the Negroid Indian chief of the village for a crew to take me up the Chucunaque River, when I saw three Indian girls appear from behind a hut, cross the village street, and disappear behind another hut on the other side. My sensations were those that a scientist would have if he were melting some lead and saw it suddenly change into gold, for I had as unexpectedly seen a legend of centuries become a reality before my eyes. These girls had white skin and golden yellow hair!

That was my first view of the now famous White Indians. A year later, following a second expedition, I came out of the same jungle, having seen four hundred of them, and bringing back to civilization two boys and a girl as living specimens for the scientists to study. For the last six months they have lived part of the time at my camp in Canada and part of the time in a home in Washington, D. C., where government experts and scientists in anthropology, biology, and genetics have been trying to decide whether they are biological "mutations" from brown Indians or are descendants of Norwegians who came to America long before Columbus's voyage. When this article is published, I shall be in that region again, with several of these

By RICHARD O. MARSH, '05
Writing in The World's Work

scientists, equipped to study these strange phenomena in their native land, and to explore their country,

where they promise me we shall find stone ruins of cities their ancestors inhabited.

My astonishment at my first view of White Indians may be better imagined when I explain that Yavisa is at the head of navigation of the Chucunaque River in Darien, or Eastern Panama, and the farthest outpost of anything like civilization, in an unexplored tropical wilderness. Yavisa is peopled by Negroid Indian half-breeds, and is a trading post to which "tame" jungle Indians come to barter. The only white men that ever visit the place are a very occasional trader, or, as in my case, an engineer looking for rubber. I had as little reason to expect to see a white woman in Yavisa as David Livingstone would have had to meet Queen Victoria in equatorial Africa. And I had seen three! And savages, at that; for they wore only loin cloths, and stepped the jungle path with the free, natural grace of the Indian.

They had come and gone so quickly that I had only the one glimpse of them. But that glimpse was enough to excite my eager interest, for the legend of the White Indians is as old as American history, and in twenty years as a civil engineer, practising my profession up and down both hemispheres, I had heard it on many



© Harris & Ewing

"WHEN A FELLER NEEDS A FRIEND"

Here is one of Mr. Marsh's White Indians having his vocabulary examined at The Smithsonian Institution. It looks a bit painful. Mr. Marsh is standing at rear center, between his two other Indian protégés



© Harris & Ewing

WHITE INDIANS AND THEIR DISCOVERERS

Richard O. Marsh, '05, and Mrs. Marsh, flank the three transplanted young savages. They are Margeruite, Chepu and Olo. Somehow we fancy Margeruite was christened differently. You know girls are

occasions and in many lands from frontiersmen and natives. Columbus himself declared that he had seen them. Cortez found a hundred of them imprisoned in Montezuma's palace in Mexico City and venerated as "the children of the sun." Vancouver saw them on Vancouver Island in 1792, and Commander Stiles of our own Navy claimed to have seen the remnants of the same group in 1848. Humboldt saw about a hundred White Indians in Colombia.

But, like every one else, I did not really believe in White Indians. I attributed the stories to hallucination, or to the mistaking of albinos or half-breeds for really white people. But the girls I had seen were not, I was convinced, any of these. I have seen thousands of half-breeds, of many mixtures, and there is an unmistakable something about them that reveals their hybrid origin. These girls gave no such impression. I asked the village chief about them, and he told me they lived in a hut outside his village, with a man of the same appearance. They did not mingle with his people, and he explained that no one would dare molest them for fear of the vengeance of their tribe. They

came, he said, from far inland, up the Chucunaque River, where no Negro or tame Indian dared to go, for the savages there had forbidden it and were warriors of such prowess that their edict was respected. No white man, even, had ever gone into that country and returned. A detachment of the Panamanian army had tried it and had been exterminated. The White Indians were a numerous tribe, he added, and were allies of the savage Wallas, Mortis and Cunas Bravos.

I resolved to call upon the strangers. I followed the path the chief indicated, and half a mile came on a little clearing, in which was a pole-and-palm hut, with its floor several feet above the ground and its "door-steps" a log with notches cut in it for a foothold in ascending to the entrance. After much calling in English and Spanish, the three girls appeared; and after many signs of my good intentions, they ventured to the ground and accepted the present of a handful of freshly minted ten-cent pieces. They let me look at their golden locks closely enough for me to be certain they were not dyed, and I was equally sure that the whiteness of their skin was not an artificial calcine.

Their eyes were not black, but a light brown, proving that they were not the usual kind of Indian, nor, on the other hand, albinos either. It was growing dusk but I managed to get some snapshots of them. They spoke neither English nor Spanish.

The next morning, we made a one-day journey up the river beyond Yavisa. By noon we had come into a region that promised to disclose just such a valley of rubber lands as I had dreamed was there. I urged my companions to go farther. But they had had enough of jungles, and we turned back.

And, then, rounding a bend in the Chucunaque, we came head-on upon the most startling apparition I have ever seen. A

canoe came toward us, and in the bow stood a naked savage with a white body, whose yellow hair, falling to his shoulders, was held in order by a gold chaplet two inches wide encircling his head at the brow. He was of medium height, but magnificently developed about the chest and arms; and he stood as erect as a king. Behind him were a girl of ten and a boy of four, and in the stern his wife wielded a steering paddle. Not one of the four gave a start when they came suddenly upon us, and the man and woman did not vary a heart-beat in the rhythm of their strokes as they plied the canoe to pass directly by us. The man eyed us with a truly regal pride and disdain, and passed us by without troubling to turn his head to see whether or not we intended to follow. His whole manner said more plainly than words: "I am king here; what are you doing in my domain?"

This uncanny vision settled any doubts my companions had about exploring further. The tales of the Negroid chief, about the savages upstream, had been given a most startling confirmation. They had seen enough. "We are no jungle rats," they exclaimed, "and we didn't come down here to get ourselves struck in the back with a poisoned arrow. Our business is law and rubber. There's neither here, and we're going home — tonight!"

And homeward we headed. It was a bitter disappointment to me to have my Panama rubber lands remain undiscovered, after such an incomplete exploration. And my disappointment was doubled at my

inability to follow the trail of the White Indians who, I now felt sure, were no mirage of fanciful pioneers but a scientific fact.

I lingered in Panama after my companions had gone on to the States. I told my friends in the Canal Zone Government about my White Indians, and I got the incredulous sympathy usually paid to a respected citizen who has gone a little off his head. They all believed that I honestly thought I had seen them but they thought it was either "a touch of sun" or that I had seen albinos or half-breeds. The only exception to the chorus of doubt was General Babbitt, of our Military Service at the Zone, who listened cordially.

Returning to the States, I interested new capital in a second expedition—the backers of my first one were polite but skeptical. I was now determined not only to prove that there were good rubber lands in Darien, but also that there were White Indians there. I am not a scientist, and I did not intend to have the credibility of this discovery rest upon my own unscientific observations. I therefore made the following proposition in identical terms to the University of Rochester, the American Museum of Natural History, and the Smithsonian Institution: "If you will detail a scientist to accompany me on a thorough trip of exploration of interior Darien, I will deposit cash to your credit, before I start, sufficient to pay his salary and expenses for the entire time we are gone, and you will pay him yourselves from this fund. He will then be solely responsible to you. Furthermore, I will guarantee that he may leave the party at



THE INDIANS REVOLT

Here is Panamanian soldiery, arming to put down the San Blas revolt. Confused newspaper accounts seem to indicate that Mr. Marsh is accused of inciting an Indian Revolution. See page 295, also

P. & A. Photos

any moment that he feels the results of the trip do not justify him in continuing, or if he feels that any deception is being practiced."

All three institutions declared that this was a proposal that could not be refused. Especially so, because Darien is a sort of "missing link" in the scientists' knowledge of American fauna and flora. The animal and vegetable life of North and Central America is sharply differentiated from the corresponding life of South America, and scientists have long hoped that unexplored Darien would some day reveal the transitional forms that would bridge this gap in natural history. The

University of Rochester, therefore, detailed Prof. H. L. Fairchild, to study the geology and biology of this region; the American Museum of Natural History sent Dr. C. M. Breder, to study the snakes, fish, and invertebrates; and the Smithsonian Institution sent Prof. J. L. Baer, to study the men and apes from the viewpoint of the trained anthropologist.

I secured also the coöperation of the War Depart-

interior to be correct. There were two mountain ranges, one paralleling the Atlantic coastline and the other the Pacific. Between them lay a level valley, twenty-five miles wide and nearly one hundred and fifty miles long.

But I was even more excited by the evidences of human habitations of a much higher type than those of any Indians I had ever seen before. Time after time we would see a village below us, not a few huts carelessly huddled together but many dwellings set in orderly rows upon a geometric pattern and dominated by a great communal house big enough to foregather all the hundreds of inhabitants of the village. Some of these tribal assembly places were built on hill-sides, so that they were in effect three stories high. In several villages, the inhabitants appeared much fairer than Indians I had known; though we never got a close view of them, for when we swooped from a thousand feet to two hundred above ground, they disappeared like gophers into their holes, going doubtless into the jungle to escape this fearsome apparition from the skies. Months later, I talked to inhabitants of these villages, whose rec-

ollection of my aerial visit was still a fresh memory of terror.

After we left Yavisa for our plunge into the jungle, we were subjected to continual surveillance of the most trying kinds. Every night our ears were filled with weird forest cries from upstream and below—whistlings that we mistook for bird-calls until we observed that they came in mathematical combinations which clearly proved their human origin and that they were signals between unseen observers. In the morning, we would find their footprints on the river banks, and we would also find wild turkey feathers stuck in patterns in the mud, as witchcraft magic to hinder our progress. At the mouth of the Tuquesa River, we surprised a party of Cunas Bravos who had camped there to ambush us, and of whom we had received warning from a friendly Chocoi chief.

Then we had sickness to contend with. Dr. Brin got malaria and I sent him back to Yavisa with one canoe and its crew. He returned to Panama and died the day after his arrival. Further upstream, Dr. Baer was infected by flies that bit his arm after they had settled on a tumor in a monkey he was dissecting. We were now too far inland to send him back, and for weeks his sufferings were a drain on our sympathies and his helpless weight an additional burden to be carried across portages in the tropical heat. Often the shallow water and the fallen tree trunks across the stream made travel so difficult that two miles was a hard day's journey. Our difficulties daily increased, and our store



ment and the Department of Commerce at Washington, the Canal Zone Administration, and the Panama Government. These connections added to my party Major Omer Malsbury, topographer; Major H. B. Johnson, naturalist; Lieutenants Townsend and Rosebaum; and Dr. Raoul Brin, botanist and soil expert detailed by President Porras of Panama. I took along also a newspaperman, and Mr. Charles Charlton, representing the Pathé motion picture people. Altogether, my party numbered eleven whites and thirteen Negro laborers obtained at Panama.

The War Department placed at my disposal two airplanes, with which I made a reconnaissance flight from Panama City, ascending the Bayano River to its headwaters, and descending the Chucunaque River to a point near its mouth. In less than one day I covered in the air more territory than the expedition later covered in four months through the jungle. I traveled in the first plane as pathfinder, and the second plane followed about half a mile in the rear. When I saw something I wished to have photographed, I got my pilot to sweep low and circle over the spot, which was a signal for the second plane, containing the photographer, to follow our example and take the pictures. An army topographer, in my plane, made notes of the geography of the country as we raced along. In this way we got a very fair record of the mountain ranges and water systems of the whole region.

The first fruit of this flight delighted me very much, for it proved my surmise about the nature of the

of supplies fell lower. When we pitched camp at the mouth of the Sucubti River, we decided that we must strike across the mountains to the Atlantic Coast and end our travels as soon as possible. We established relations with a native sub-chief, who spoke English. His one anxiety was to get us out of the country. If we had not been so heavily armed, we learned afterward, we should have been rushed and massacred; but the natives knew every detail of our equipment, even to the dynamite we carried, and were afraid to try it. He guaranteed safe conduct to the coast if we would promise to leave. I sent a scouting party of three men, under native escort, to the coast to explore the trail and to telegraph Panama for medical aid and supplies. One of these men deserted at the coast. The others came back, and led us over the trail. Dr. Baer died soon after we sighted salt water. The Government ordered the soldiers with me back to the Zone, and I was left at Caledonia Bay with only Charlton and Johnson. Not one White Indian had we seen, and we were regarded with suspicion and hatred by the natives. Except that I had pretty well assured myself that the interior was suitable for rubber plantations, and that Dr. Baer's and Dr. Breder's researches had been productive, the expedition was a pretty sad wreck.

But from this point on, the luck turned. I had learned from the sub-chief of the Sucubti that all the tribes of Darien yield allegiance to a head chief whose title, in their language, is Ina Paguina. He is the latest of a long line of hereditary overlords who have ruled the country as feudal chiefs for many centuries. His seat of government is at Sasardi, an island on the San Blas coast. I got word to him that I wanted an audience with him. This was arranged, and accompanied by Charlton and Johnson, I sailed to his island.

After long negotiations, he became convinced of my good faith, and called a congress of his chieftains to discuss my plan for an Indian sanctuary. The chieftains came from all parts of the Atlantic Coast of Darien, and I was astonished to learn of the high level of political organization they had achieved. Not only did they have an hereditary feudal government, but courts of law with a recognized code of precedents. Every tribe also sent at least one young man forth to see the world, and these youths had traveled as sailors to New York, San Francisco, London, and, some of them, around the world. The Ina Paguina even had a secret service in the City of Panama that kept him advised of the intentions of the Panamanian Government toward his people. He knew all about the progress of the white men in the arts of war and peace, and had foreseen the approach of the day when his own domain would face exploitation and his people the common fate of the Indian. The congress of chiefs approved my plan to enlist aid for their preservation.

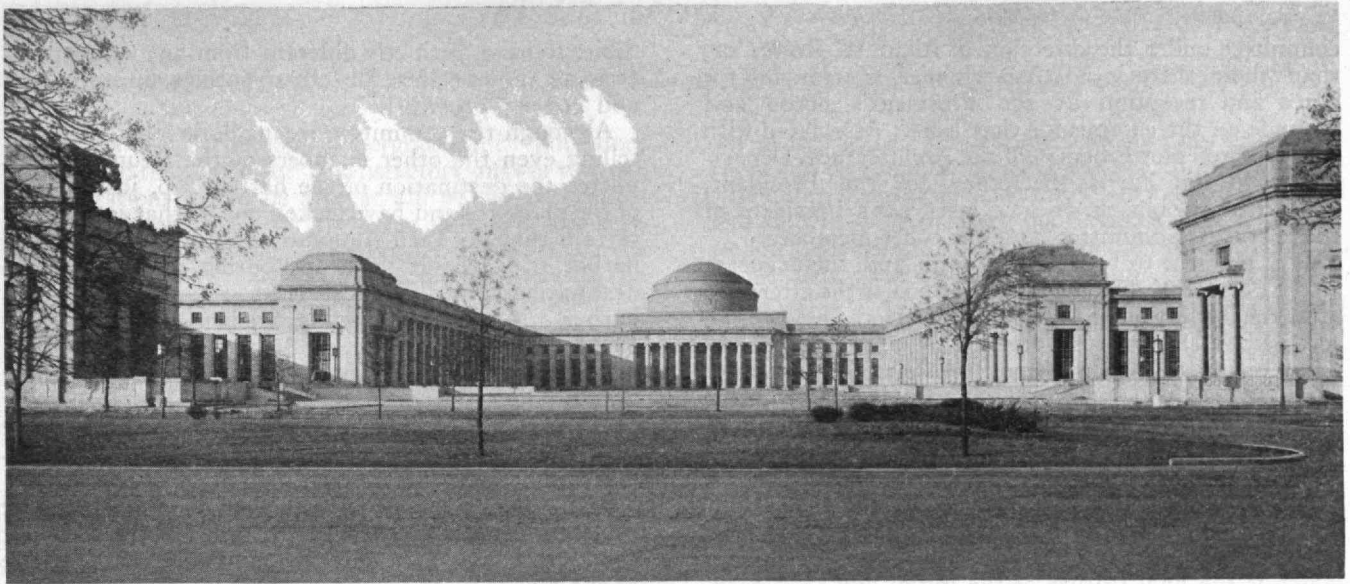
Then I asked to see the White Indians. At first they denied their existence, but I proved to them that I knew better. I also explained their scientific importance, and their value in creating American interest in all the Indians, by their demonstration of the reality of the links connecting the Indian to the white man by the ties of blood. This argument won them, and word was sent out to bring them in.

White Indians now appeared, to see us, by the score. They came from the mountains of the San Blas coast, from the interior, and some even from the islands themselves. Within a few weeks I had seen four hundred of them—men, women, and children. I photographed them with the motion picture camera, examined them carefully and assured myself that they were neither painted nor dyed, and learned a good deal about their customs, local status, and biological character.

Following the congress of Indian chiefs on my plan to help them form an Indian sanctuary, they provided me with three children to bring back to America for scientific study. These are a girl of sixteen and two boys of ten and fourteen. They provided also an adult couple of brown Indians to act as their guardians, an English-speaking San Blas Indian to act as interpreter, and two leading young chiefs. This is the party I brought back with me to Washington. The Ina Paguina himself planned to come, but the Panamanian Government refused him a passport on the ground that his resistance to the "pacification" of the San Blas islands made him legally an outlaw.

These Indians offer the most promising field yet opened up for finding the answers to two of the most fascinating mysteries of science: first, how white men evolved from the primeval brown race and second, what the facts are behind the still undeciphered remains of at least two great white-influenced civilizations that once flourished in our continents, the early Mayan of Central America and the Pre-Incan of Peru. It behooves us to keep intact these few tribes whose culture marks them as probably the only remaining inheritors of the traditions that can unravel the mystery. If, as now seems possible, we can work out the answer through a study of them, we shall be able largely to write the authentic story of those prehistoric Americans, who wrote hieroglyphics as complex as the Egyptian, who were astronomers of the first order, who built walled cities, practiced mummification, performed delicate surgical operations on the skull, had a systematic science of pharmacy, originated the use of quinine, cocaine, valerian, and a dozen other standard drugs, wrought gold into beautiful ornaments, cut and polished and wore diamonds and other precious stones, and altogether were a people of as high development as were the ancient Egyptians and Phœnicians.





"TAKE ME BACK TO TECH"

© Clifton Church

What about the Reunion?

The Alumni Secretary waxes enthusiastic over the celebration scheduled for June 11 and 12

Although we are very apt to lose sight of the fact, it is none the less true that for most of us Tech Alumni the most intimate associations of college life were formed in our undergraduate days, and a reunion is the natural means by which these affectionate ties may be preserved. We all made lasting friendships during our days at Tech, but in many cases, save for the opportunities provided by reunions, there has remained only the more or less infrequent exchange of correspondence to keep alive this mutual regard. Human contact renewed with old friends in the locality where the friendship originated is reinvigorating and also serves to preserve, as nothing else, the loyalty felt for our Alma Mater.

In the last analysis the beneficiary of a reunion is both the institution and the alumnus. Both are broadened by renewed contact. Appraisals are inevitable. The Faculty has an opportunity to appraise its product, and we as Alumni can return here and see the work the Institute is doing and become more thoughtful and appreciative of what it has done for us and can do for others. Our experience since graduation has produced new points of view, and from these we can appraise Tech in relation to life as we have found it, and thus be of distinct benefit to our Faculty. And so at the forthcoming 1925 All-Technology Reunion we are featuring a "Day at the Institute" at the start.

Thursday, June 11—"A Day at the Institute"

Our genial Bursar, Horace S. Ford, as Chairman of the sub-committee on Building Inspection and Buffet Lunch, has surrounded himself with a splendid corps of Faculty mates, under whose direction the returning Alumni will see in operation many of the laboratories of the Institute, including practical demonstrations of

By ORVILLE B. DENISON, '11
Secretary-Treasurer, the Alumni Association



THE AUTHOR

the type of advanced research work that has been and is now being carried on here. It is planned to have a veritable "Open House" for the Alumni on this day—not a drab tour of inspection, but a series of practical exhibits and demonstrations in every nook and cranny of the New Technology. Many of us have not been within the portals since the memorable Reunion of 1916, and oh, what an eye-opener it will be for those of us in that category really to see the wonders of our present establishment.

Glance through the personnel of the capable associates Uncle Horace, (as he is known to the undergrads), has chosen to assist him:

H. G. Pearson, General Studies; H. W. Gardner, '94, Architecture; H. W. Hayward, '96, Testing Materials and Heat Treatment Lab; W. Spencer Hutchinson, '92, Mining; Vannevar Bush, '16, Electrical Engineering; R. T. Haslam, '11, Chemical Engineering; R. S. Williams, '02, Metallography; George Owen, '94, Naval Architecture; L. F. Hamilton, '14, Chemistry; R. H. Smith, Mechanic Arts; H. L. Bowman, Civil Engineering; J. T. Norton, '18, Roentgen Ray Laboratory.

The plan is to have a special exhibit as well as demonstrations of particular interest to the Alumni at recurring intervals in each of these departments and to have these listed and scheduled in a special program with competent guides available to take the visitors to as many or as few of these as they desire. Through the day a Buffet Lunch will be served either at the Walker Memorial or in one of the Courts.

Thursday, June 11—"President's Reception and Tea."
In the late afternoon of this "Day at the Institute" Dr. Stratton has most graciously consented to act as host to and for the Alumni Association and a

committee under the direction of Allan W. Rowe, '01, than whom there is no than whomer, is arranging for a tea and reception at the President's house and grounds on the campus for that time. Associated with him are Professor Emerson of the Architectural Department, Morris Parris, Secretary to the President, William H. Robinson, Jr., '24, last year's President of the Institute Committee, and one other member.

It is planned to bring the Alumni and their guests to the President's house between 4 and 6 in the afternoon after the inspection of the buildings. Here they will be received by Dr. Stratton, assisted by officers and prominent members of the Alumni Association and their wives. Music will, of course, be provided and a splendid opportunity given those present to enjoy the charming rooms and spacious garden at the President's home.

The hours of 4 to 6 are selected in order that everyone may have an opportunity of greeting the President and then without haste attending the jambouree dinner which is the final feature of the initial day.

*Thursday, June 11—"Jambouree Dinner"**

It wouldn't be a real Tech Reunion without a big dinner, would it? In the past we've had some corking good Tech dinners and this year we have a fine, energetic committee together, whose sole object in existing seems to be to eclipse all previous efforts at giving the Alumni a bang-up good feed, with plenty of real enjoyment and no long-drawn-out speeches to bore them. The preliminary estimate of reunion attendance shows so conclusively that we are going to have a young mob back for this two-day party, that the dinner committee chairman, Carl Gram, '09, former quarter-miler and dash man de-luxe, and his committee-mates are worried over where they can stage the dinner. But fear not; the solution will be arrived at—leave it to a Tech committee.

Associated with Carl on the dinner committee are E. L. Moreland, '07, W. R. Mattson, '13, H. P. Eddy, Jr., '17, and for the alumnae Miss Eleanor Manning, '06. All of these individuals have had considerable experience in work of this sort and it seems inevitable that a highly successful and enjoyable dinner will result from their efforts.

Friday, June 12—"Boston Harbor Outing"

All of us look back with pleasant memories to the harbor outings which we have had in the past—the trip to Nantasket in 1904, the trips to Nahant and Nantasket on successive days in 1909, the memorable day of days at Nantasket in 1916, and the trip to Plymouth in 1920. But this year, a committee under the direction of Donald G. Robbins, '07, and comprising also Frederick H. Fay, '93, George B. Glidden, '93, Harry C. Whorf, '95, C. R. Lamont, '07, Gordon B. Wilkes, '11, Harry D. Peck, '13, and Eric F. Hodgins, '22, are busily at work on a harbor trip which they

desire to have distinctly different from any of its predecessors and to eclipse all former outings in enjoyment and novelty provided.

Although the committee is singularly reticent about telling even the other members of the Reunion Committee the destination of the harbor trip, just enough of the plans at hand have leaked out so that it becomes certain that no Tech Alumnus can afford to miss this harbor trip. Aside from the outing features at the destination, when it is reached, the trip down the harbor will give the visiting firemen an opportunity to see the Port of Boston, its Army Base, its Leviathan dry-dock, the new floating dry-dock of the Bethlehem Shipbuilding Corporation, as well as the surpassing beauties of Boston Harbor, with its score, or more, of islands, its fortifications, lighthouses, and historic landmarks.

The committee lays particular emphasis on the fact that box lunches will not be the order of the day, but again it is reticent about divulging the exact nature of the repast to be provided. One more glance at the personnel of the committee in charge, however, will reassure one that the affair is in most capable hands.

Friday, June 12—"Tech Night at the Pops"

Tech Night at the Pops has been for years, and is still, a regular function of Senior Week at Tech. Each year a number of Alumni, as well as almost the entire senior class, attend the event, but during an All-Technology Reunion, of course, more Alumni than in other years will attend. This will give us our opportunity to welcome the freshmen of the Alumni Association—this year's graduating class—into membership. It's up to us as Alumni to make this welcome as hearty as possible. The usual musical program will of course be provided by the Boston Symphony Orchestra, and many extra features are being arranged for by the committee in charge: Frederic Bernard, '17, chairman, Raymond S. Stevens, '17, and Alexander MacMorran, '21.

Saturday and Sunday, June 13-14—"Class Outings"

As a splendid climax to this short, snappy two-day program a number of the classes are arranging week-end parties just to put the needed finishing touches to a highly enjoyable get-together. During the two days of general celebration one is given the opportunity not only of renewing acquaintanceship with one's own classmates, but also with other Institute friends. Here, over this week-end at the class reunions, one can live again the bygone glorious days and thus provide a splendid finishing touch to this period of renewal of friendships.

Reunions are, like vacations, very much needed every once in a while. A real vacation is always strenuous, filled to the last moment with good time, plenty of exercise, and plenty of good food. This is what the 1925 All-Technology Reunion is full of nothin' else but!

*EDITOR'S NOTE—Many of our readers have asked us for an interpretation of this term "Jambouree" as here used by Mr. Denison. For possible value to our readers we quote a dispatch from "Time" for March 9—

"In Brooklyn, 1,500 revelers danced till 3 A.M. at a jambouree given by the Oberdam Social Club (Irish), then sought their hats, their coats. A long line formed. Two revelers altercated for precedence, first with fists, then with knives; the rest, hatless, coatless, likewise fell to. Patrol wagons, ambulances, ended their jambouree."

Who and Why

A statistical study of the Technology undergraduate, done by the Dean's Office for the S. P. E. E.

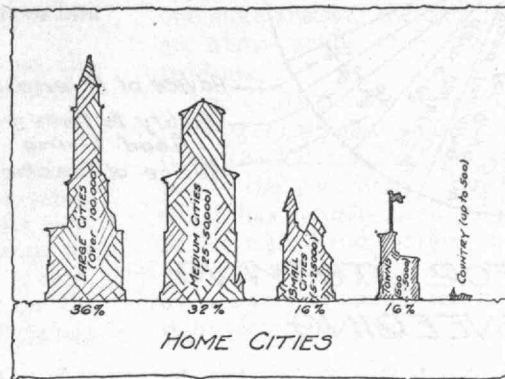
Who is the Technology undergraduate? Why does he come to the Institute? A satisfactory answer to these two questions would be a great aid to the authorities in planning the work for the large numbers who seek admittance every year. An approximation to correct answers would undoubtedly help the Institute in its academic and social relations with the student. Perhaps even an approximation may not be arrived at, be the study never so scientific. But straws, even though at the mercy of gusts, do have a comforting way of floating down the wind and a hundred straws snatched at random from the breeze in the shape of a hundred questionnaires, chosen haphazard, may at very worst reveal some interesting facts and may even furnish food for sober thought.

The questionnaires mentioned were distributed from the Dean's Office. Their subject matter was an abridgment of a similar document, emanating from the Society for the Promotion of Engineering Education. The questions were twelve in number, calculated to ascertain from each individual, the date and place of his birth, the nationality and economic position of his parents, the size of his home community, the type of preparatory school he attended, the rank he attained in his early scholastic activity along with the subjects he preferred, the factors which most influenced him to go to college, to study engineering and to choose the particular branch of engineering in which he is to specialize, and finally whether his primary decision was for college in general or as a means to the acquirement of engineering education. A hundred of these questionnaires have been selected casually, the results tabulated, and they are here placed before the readers of *The Review*.

Probably the most striking thing in the whole set of answers is that 14 per cent of the men, or one in seven, are foreign born. Of these, about half give their home as the United States; the other half are still living abroad. Two men out of the entire Freshman class are foreign born, but of American parentage. A survey of the class-rolls at the Institute might lead an observer to remark that this number of foreign born seems low in view of the difficulties of pronunciation encountered in reading these lists. This is explained in the answers to another question which show that one or both of the parents of 40 per cent of the men were foreign born. In the case both of students of foreign birth and of those of American birth but of foreign parentage, the number of Russians is surprisingly high. We find that about one-seventh of all the men with foreign blood are of Russian stock.

These figures are almost identical in proportion with those for the population of the whole country.

Having ascertained the nationality of the student and thus in some measure his predicable racial characteristics, we are next interested in the type of education he has had, prior to his entrance into Technology. In this matter of education, parentage, of course, plays a great but not easily determinable rôle. The environment of the home is a subtle thing, evasive to the touch, and not to be discovered by any questions that have been devised to date. So, too, in some measure is the influence of the boy's community but in this case its size is a measurable and undoubtedly an important factor. In a distinct way the atmosphere of a community is a



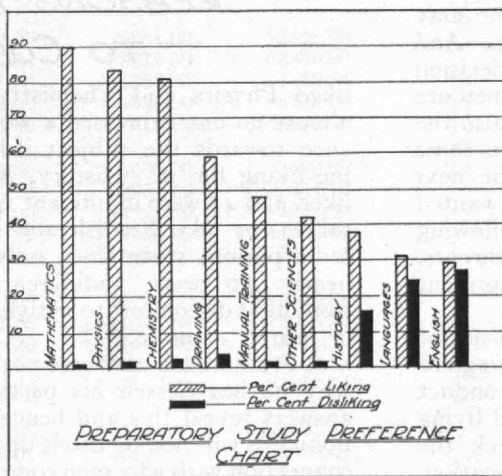
function of its size. In this connection we find that nearly 70 per cent of the entering class come from towns and cities of over 25,000 population. These divide about equally into men from large cities over 100,000 and those from cities in the intermediate group with a slight balance in favor of the former. The remaining 30 per cent are equally divided between small communities of 500 to 5,000 and large towns of 5,000 to 25,000, not one, at least in the particular hundred chosen, claiming the farm as a home. The conclusion is clear, that the greater proportion of Technology's population is the product of and acquainted with urban

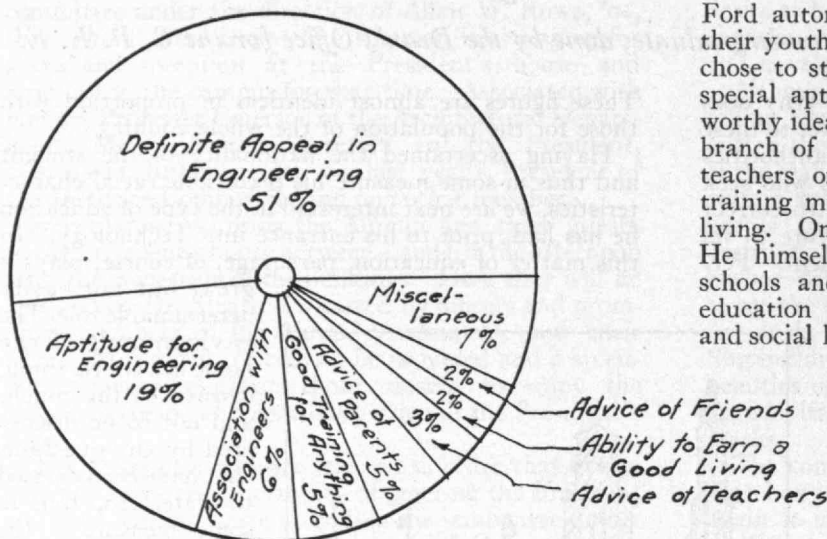
life. Even discounting the obvious effect on the figures of the large number of Greater Boston men the reasons seem plain. The boy in the small community sees the engineer, if at all, in the light of a surveyor. So far as professions go he is far better acquainted with the doctor, the dentist, the lawyer or the priest. It would be illuminating to find the percentage of small town men in institutions offering instruction in these professions, and to compare the results with those observable at Technology.

That the Institute student body is democratic and of moderate means seems to be implied by the fact that 80 per cent of the entering class attended public high schools. Only 15 per cent went to private schools. The remaining 5 per cent includes one man in a hundred who studied with a private tutor and four who were so fortunate as to have savored both public and private

preparatory institutions.

Another salient characteristic of the Technology undergraduate is to be noted in the fact that 57 out of every hundred live in the vicinity of the Institute. The word "vicinity" may be taken to include the Metropolitan District of Greater Boston and some near-by cities. Nine more live within the confines of the State and of the remaining 34, 26 are from the





REASONS FOR STUDYING ENGINEERING

United States. From this fact it is apparent that the commuter is still present in large numbers.

Who is the Technology student? His name is Dennis Giuseppe von Werner Ivanovitch Jones. He lived in Canajoharie for a while and Baltimore for another while. He spent three years and two months at Danvers High School and ten months at Hilo Country Day School. He commutes from Pittsfield some mornings and lives in the Dormitories Friday nights. So much for the ridiculous composite. We are more interested in the tendency. He has one chance in two of having first generation foreign blood. He is almost certain to have been educated in the public schools of an urban district. He is fairly likely to live near Boston and almost surely lives in the United States. Now why does he come to Technology?

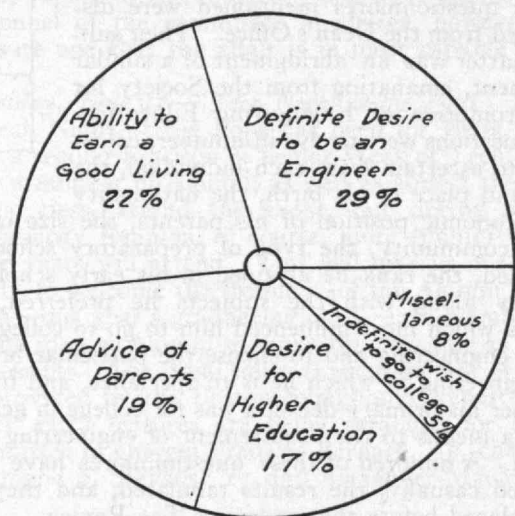
To learn something? It is not enough. One may go to any academic college to learn something. And the answers to the question as to the primary decision leave little doubt as to why most Technology men are where they are. But 24 out of the hundred raise the timorous hand when the question is put "Who came because he wanted to go to college?" To the next question, however, "Who came because he wanted to study engineering?" there comes the bellowing chorus of the everlasting *Yea* from 62 lusty throats. There are 12 who remain undecided and are present but not voting.

Having discovered this, there seems little reason for dwelling on the reasons a man had for deciding to go to college. The advice of parents governed the conduct of 19, the chimera of the ability to earn a good living lured 22 more on the path. Seventeen check the rather vague space after the desire for higher education, and 29 had a definite desire to be engineers. Apparently, Technology has none of these men who go to college in the same spirit as they eat breakfast—to whom it never has occurred that one might do anything else. One man, a Syrian, gave an answer worthy of record. He said he had a desire for mental development, for his country, his family and himself. Another, a Japanese, acted on the advice of an Instructor at Sheffield Scientific School, Yale University.

Fifty-one men had played with Meccano sets or

Ford automobiles or with draughting instruments in their youth and felt a definite appeal in engineering, so chose to study it. Nineteen more felt that they had special aptitude in engineering. Five more held the worthy idea that engineering training was good for any branch of life. Ten acted on the advice of parents, teachers or friends. Only two answered that the training might give them the ability to earn a good living. One man said that his father went to M. I. T. He himself chose Technology because engineering schools and especially the Institute concentrate on education to the comparative exclusion of athletics and social life. What would some Alumni say to that?

The reader will have noted the large number of men who have felt a definite appeal in engineering or have thought they have a special aptitude in that field. This is reflected in the subjects marked as favorites by the men. Ninety out of one hundred liked Mathematics; about 80



REASONS FOR GOING TO COLLEGE

liked Physics and Chemistry. In all of these cases almost no one expressed a worse feeling than indifference towards the subject if he did not have a genuine liking for it. History, however, we find that 37 liked and 45 were indifferent to, while 16 found it mental castor oil. English and languages were in a far more parlous state since only about 30 liked either, nearly 40 were indifferent, and distaste verging from mild discomfort to active mental pain was induced in nearly 30 more.

A Freshman is of course not likely to know definitely why he has chosen his particular field. The varied answers reveal this and hence that phase of the questionnaire will not be dwelt upon. One further thing in connection with why men come to Technology is worthy of note. That is that 72 per cent of them knew they were coming to the Institute before their last year in high school, and that only 11 per cent made their decision after they had graduated from high school. The youth of the country knows its mind early.

The results are undoubtedly encouraging. To find 50 per cent of the men taking the work for a positive reason need leave no alumnus in fear as to what Technology's future graduates will amount to. And with this thought in mind we may leave the consideration.

The Educational Endowment Fund After Five Years

*With most payments due, over five years after the close of the campaign
The Review takes stock of payments and pledges*

[For a graphic representation, see the next page.]

Over 85% of the pledges made five years ago to the Institute's Educational Endowment Fund had been redeemed by the last day of 1924. Of the remaining 15% all but a small portion, in which the payments had been promised over a longer period than five years, is unpaid and overdue.

The statistics on this page and the chart on the following one show the details of the various classes and organizations, exclusive of payments made under the Technology Plan contracts.

Two years ago 73% of the fund had been paid in, one year ago 77%. The gain during 1924 has therefore been practically twice that of 1923. The exact payments were: \$114,313.33 for 1923 and \$216,666.04 for 1924. The total elapsed time between January 1, 1920, and December 31, 1924 was 1827 days, and on the average the Institute has therefore received \$1,343.41

per diem for that period, the whole amount being \$2,454,322.71.

Six of the classes — 1868, 1874, 1876, 1878, and 1884 — have completed their payments while twenty-one more are over the 90% mark and an additional six are above 80%. Only six classes are less than half paid up.

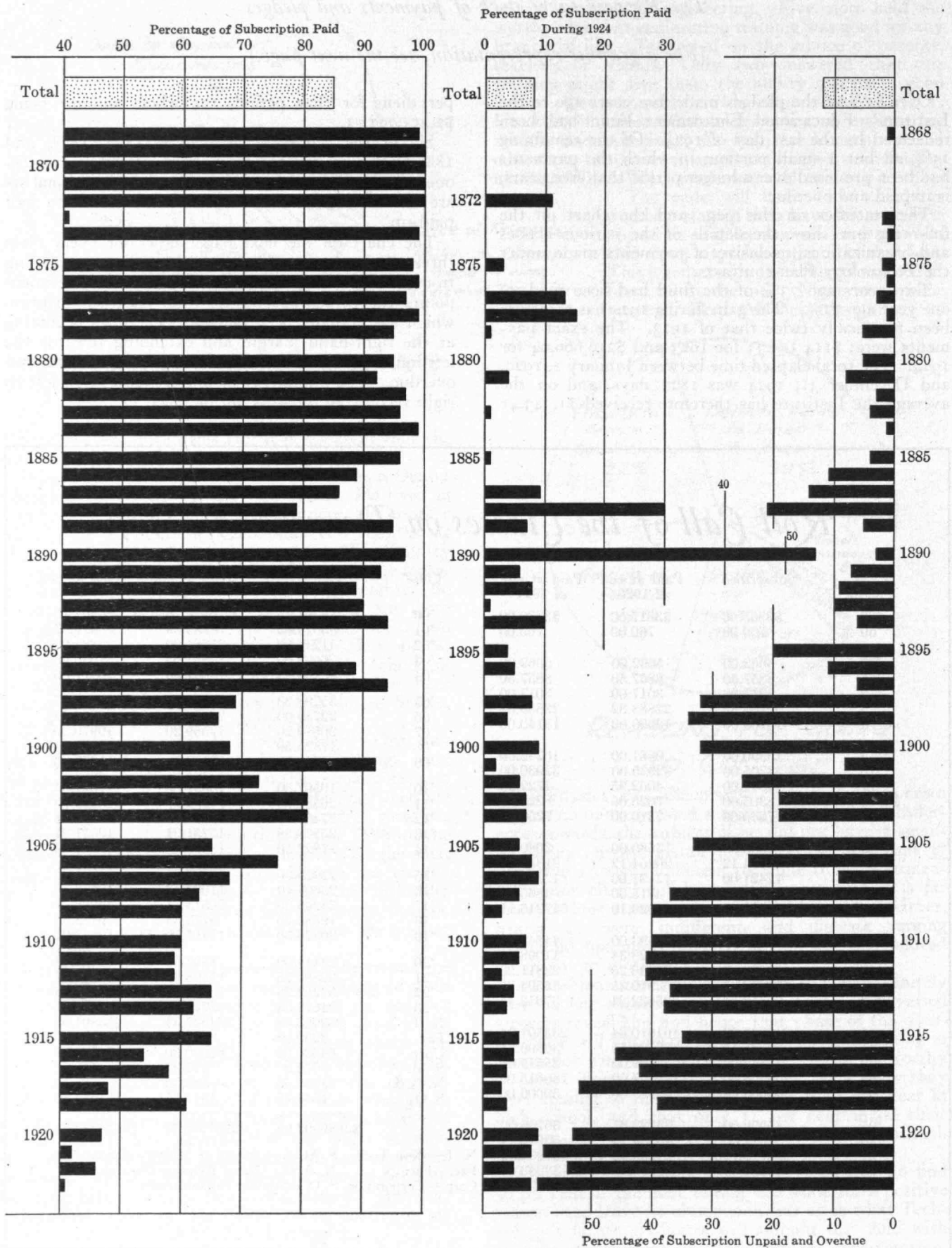
The chart on the next page shows for every class three percentages. The horizontal lines extending from the left-hand margin indicate by their terminal points the percentage of the total class subscription which has actually been paid in. The lines beginning at the right-hand margin and extending towards the left indicate the percentage of subscription unpaid and overdue. The middle set of lines reading from left to right record the progress during 1924.

Roll Call of the Classes on December 31, 1924

Class	Subscribed	Paid at end of 1923	Paid at end of 1924	Class	Subscribed	Paid at end of 1923	Paid at end of 1924
'68	\$3855.00	\$3817.50	\$3830.00	'00	28261.75	16436.75	19301.75
'69	760.00	760.00	760.00	'01	86016.65	76933.99	78929.97
				'02	41246.00	27661.00	29834.00
'70	5662.00	5662.00	5662.00	'03	26693.50	19831.65	21586.65
'71	8857.50	8857.50	8857.50	'04	25106.25	18557.50	20477.50
'72	3017.00	3017.00	3017.00	'05	35298.33	20728.00	22842.57
'73	59758.32	22853.32	22853.32	'06	39789.00	27473.68	30318.34
'74	13160.00	13090.00	13140.00	'07	29549.20	17559.20	19979.20
				'08	17525.50	10255.50	11065.50
'75	10390.00	9881.00	10242.00	'09	18732.70	10588.70	11277.70
'76	33205.00	32925.00	32930.00	'10	19507.00	10651.35	11621.35
'77	4841.00	4062.25	4722.25	'11	26581.00	14159.27	15520.60
'78	8305.00	7025.00	8225.00	'12	27469.73	15110.72	16087.38
'79	7650.00	7210.00	7250.00	'13	25508.38	15251.21	16511.21
				'14	27822.50	15662.84	17160.84
'80	3880.00	3680.00	3680.00	'15	22925.00	13527.66	14935.66
'81	23134.12	20254.12	21354.12	'16	23606.10	11661.43	12678.10
'82	12421.00	12121.00	12121.00	'17	38246.00	20515.61	22058.11
'83	5065.00	4815.00	4865.00	'18	19583.50	8773.33	9483.66
'84	517816.10	516926.10	517216.11	'19	20376.50	11417.19	12367.02
'85	46338.00	44493.00	44843.00	'20	23444.00	8893.54	11125.18
'86	12441.00	11028.34	11098.34	'21	32880.25	11308.07	13667.57
'87	27836.20	21446.20	23811.20	'22	37262.23	15348.34	17111.34
'88	108222.67	52919.35	85504.35	'23	24613.35	7721.08	10140.61
'89	39547.34	35632.34	37612.34	N. T.	280983.33	274627.33	255891.33
				Fac.	3260.00	3235.00	3260.00
'90	240263.00	101910.34	233501.34	Corp.	64520.00	63520.00	64520.00
'91	38286.51	33524.51	35699.51	S. M. A.	675.00	424.00	429.00
'92	42559.00	35504.00	38514.00	N. A. D.	1038.50	583.50	638.50
'93	200650.00	179567.50	180615.00	S. O.	1544.75	1544.75	1544.75
'94	63563.00	52988.50	59506.00				
					\$2886993.95	\$2237656.67	\$2454322.71
'95	45906.00	35222.67	36706.00	N. T.—Non Tech	S. M. A.—School of Military Aeronautics		
'96	57317.00	48264.74	50946.74	Fac.—Faculty	N. A. D.—Naval Aviation Division		
'97	100713.19	94233.19	94233.19	Corp.—Corporation	S. O.—Student Organizations		
'98	48054.00	29695.68	33243.68				
'99	23454.00	14307.33	15397.33				

Graphic Representation of Percentage Payments

For detailed explanation and tables, see the preceding page



The ARCHITECTURAL BULLETIN

PUBLISHED FOR THE SOCIETY OF TECHNOLOGY ARCHITECTS

JAMES F. CLAPP, '99
President

EDGAR I. WILLIAMS, '08
Vice-President

KENNETH REID, '18
Secretary-Treasurer

Address all communications to the Secretary-Treasurer at 491 Boylston Street, Boston, Mass.

Plans for Technology's Future

The Executive Committee of the Corporation has recently approved a plan which we are privileged to announce for the first time, whereby Jacques Carlu, Professor of Design in the Department of Architecture, in association with Harry J. Carlson, '92, is commissioned to prepare studies for the future architectural development of the Institute. The importance of such an announcement cannot be sufficiently emphasized, for it means that for the first time since the original layouts of the Institute buildings were made, there is to be undertaken a broad and comprehensive study of Technology's probable future needs, and of how they are to be met architecturally. Never before, strangely enough, has the Department been party to actual architectural plans of the Institute. Messrs. Carlu and Carlson will gather together all available information bearing upon the future growth of the Institute, including the questions of dormitories, gymnasium, a building for the Architectural Department, industrial development, the normal growth of the present departments, treatment of the Great Court, provision for athletic fields, and so on. They will present alternative schemes of development and will submit a report outlining reasons for the basis of each scheme of development suggested. It is expected that the study will be completed about March 1, 1926.

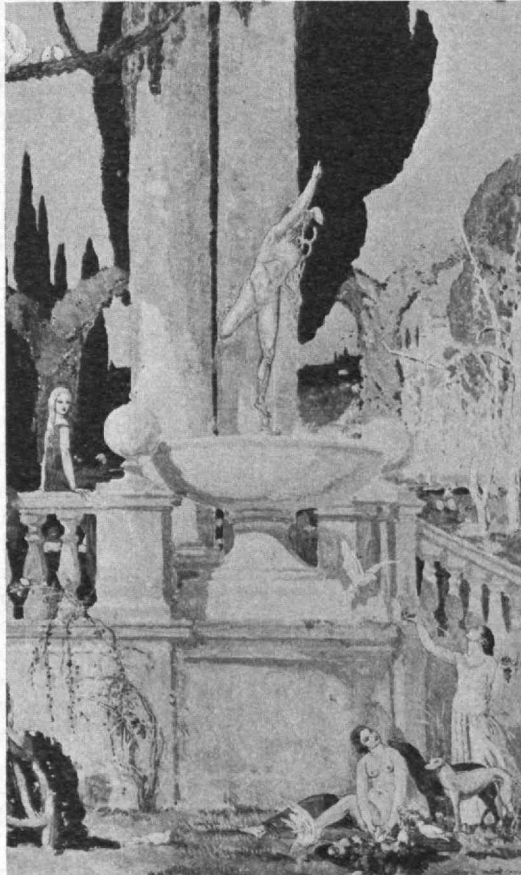
Professor Emerson has been working towards this arrangement ever since he secured the services of Professor Carlu for the Department, partly with the idea of providing additional outlet for Professor Carlu's architectural energies and partly because he realized the necessity for carrying on some such study as that which is to be undertaken if the Institute were to be developed logically in the future. It is interesting to note that the idea was treated editorially in the February issue of The Technology Review independent of any other suggestion.

The Guggenheim Foundation

The newspapers of Monday, February 23, contained the announcement of a preliminary gift of \$3,000,000 to establish the John Simon Guggenheim Memorial Foundation endowing fellowships for advanced study abroad. The Foundation is of particular interest to Technology and to Technology Architects, first, because the Chairman of the Educational Advisory Board which will assist and advise the trustees on matters of educational policy, is President Frank Aydelotte, of Swarthmore College, a former Professor in the Institute's Department of English and History, and, second, because one of the members of this Educational Advisory Board is Professor Emerson, Head of the Department of Architecture.

Most of our readers will by this time have seen the announcement, thus rendering it unnecessary for us to go into detail here beyond drawing especial attention to certain of its salient points. The fellowships which are established by this fund are to be available to young men and women, single or married, of any race, color or creed, who have shown marked ability in any field of knowledge and especially in any of the fine arts, including music. There are no age limits prescribed, but the intention is that the fellowships will be held by students somewhat older than those to whom the Rhodes scholarships are open, including young professors on sabbatical leave, holders of fellowships from individual colleges, and those who have won distinction in graduate study. The amount of money available for each

fellowship will be approximately \$2500 a year, which may be spent on travel and study in any country in the world. The first awards will be made for the academic year 1926-27 and during every year following there will be maintained annually from forty to fifty fellows abroad. The fellowships were established in memory of the son of Senator Simon Guggenheim, of



THE MERCURY FOUNTAIN
*A decorative composition by Professor Jacques Carlu,
which was included in his recent exhibition*

Colorado, who died while preparing for Harvard.

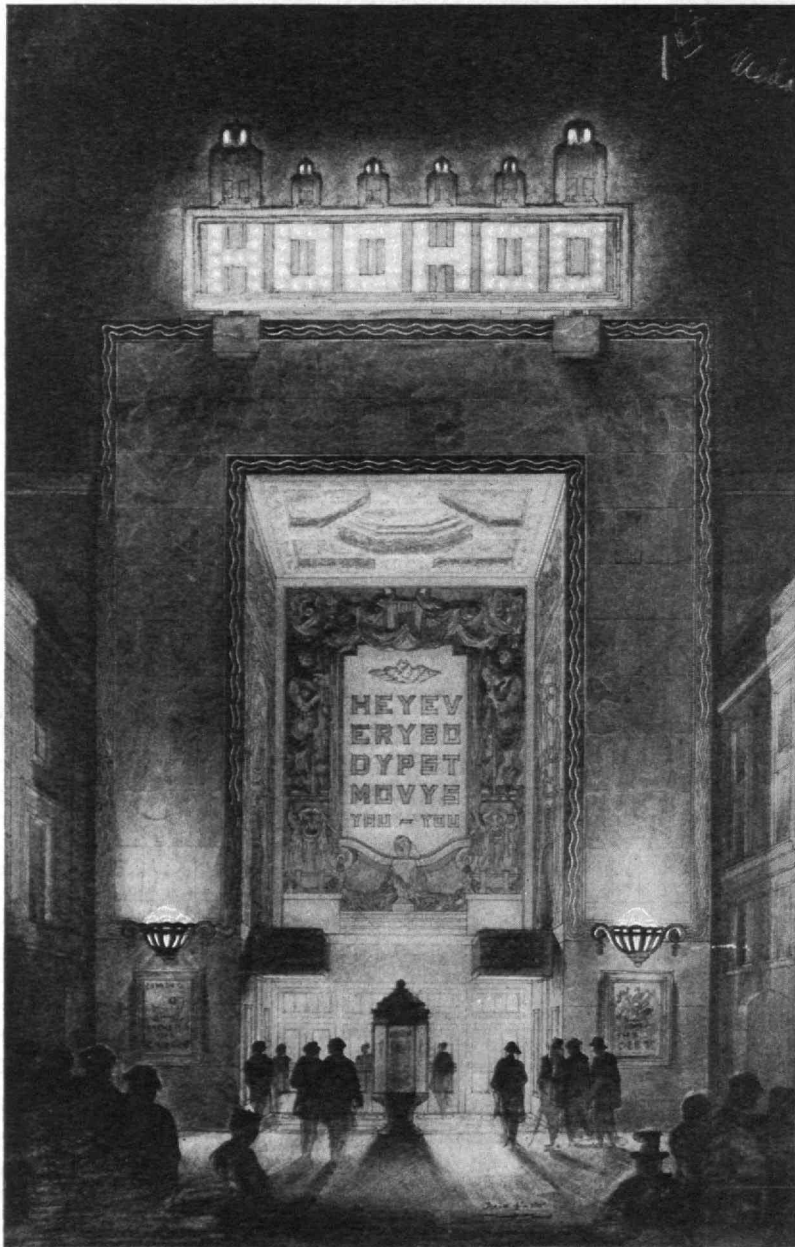
Shortly after the announcement was made an enterprising reporter on the *Boston Transcript* interviewed a number of Boston professors and graduate students engaged in various fields of activity, on the subject of what they would do if selected for one of these fellowships. Among those interviewed, Technology was represented by William V. Cash, who is a graduate student and instructor in the Architectural Department and the holder of last year's Institute Traveling Fellowship. It will be of interest to quote him:

"You ask me what benefits I might expect or hope to obtain from the privilege of study abroad as a possible holder of a Guggenheim Fellowship. One might answer that he hoped to obtain in some fashion a broader architectural culture. This answer, of course, is rather vague and unsatisfactory, but it seems to me that no answer to so general a question can be

otherwise. Culture is not something to be consciously acquired; it consists more in an attitude of mind to be gradually achieved by a process which might well be likened to absorption. It is my ambition to devote myself to the teaching of architecture, and to be competent to undertake its practice. If I am to be able to do this to best advantage I must have the opportunity to study at first hand the great architectural manifestations of the past. These lie abroad, and no amount of the essential preliminary study of books and plans in the classrooms, however excellent, of this country can lend the depth, the perspective, that is necessary to the sympathetic appreciation of the works of antiquity. I am no mediævalist; I have the most respectful admiration for the excellent American architecture of the present day, but I do believe that modern architecture, to be entirely sound, must strike its roots into the past. If a man is to build a skyscraper which will be appropriate and expressive of the spirit of Modern America he must be able to grasp the spontaneity which the architects of the past brought to their work and which made them seem so inevitably a part of their time.

"It is a corollary to what I have said that I have not too much faith in measured drawings and envois as a means to getting the most out of time that is short and precious. For this reason I should expect to minimize those things and spend a large proportion of my time in sketching, photographing, and observing. One never sees anything until he tries to sketch it; it is then that he comes as near as he ever will to understanding it; to observing with all the care of which he is capable not merely the unrelated details of an object, but the manner of their relation to the whole. One loses the spirit of the Parthenon when he attacks it with an architect's scale and attempts to render it into arithmetical symbols; one gains an insight into its perfection when he puts his pencil to paper in the attempt to show, by selection and omission, what it means to him. Nor is the actual sketching the only mode through which the student grows in stature. It is incalculable how much he gains by his very nearness to the structure: he is able to steep himself somehow in its atmosphere, and put on knowledge unconsciously in the words of Lowes Dickinson, 'as he puts on flesh, without knowing how.'

"It stands to reason that a man who has been at pains to acquire what may be called, loosely, of course, the European Viewpoint will have more to offer his students as a teacher than the man who has not made the attempt or had the opportunity to widen his horizon. It is for this reason, specifically, that I should welcome an opportunity such as the Guggenheim Fellowships will make possible or such as the Institute Scholarship does make possible. For it is the duty of the real teacher to make architects, not draughtsmen, and men with vision, not designers of detail."



ENTRANCE TO A MOVIE THEATER

A fanciful solution of a problem in design taken conjunctively with Harvard and the Boston Architectural Club, which brought the Compliments of the Jury upon its creator, John H. Raftery, '24

The Carlu Exhibition

An exhibition of drawings, sketches, and water colors by Professor Jacques Carlu was held from March 12 to 19, inclusive, in the rooms of the Architectural League of New York, after a preliminary hanging on March 9 in Rogers Building. This exhibition furnished an impressive array of evidence of M. Carlu's versatility. Every one of the water colors was extremely decorative and full of living color. The sketches cover a wide range of material selected in France, Italy, Greece, and North Africa, and may be roughly divided into two groups: one reflecting his interest in the work of the Greek, Etruscan, and Roman Builders, who took advantage of their magnificent natural surroundings as settings for their temples; the other his sensitiveness to the charm of gardens and garden architecture, of stately cypresses and bubbling fountains, of shady pools and richly massed foliage. Mention of a few of his subjects may be sufficient to conjure up in the minds of those of our readers who have traveled abroad, something of the beauty which he has ably attempted to record. There are several sketches made in the gardens of the Villa Medici, in Rome, the home of the French Academy, and two of the cascade of the Villa Torlonia at Frascati. There is a view from the hillside above Assisi looking out over the town and across the Campagna, fading into the distant hills. There is a view of the jewel-like pool of the Villa Falconieri at Frascati, with its unequalled border of cypresses, and there is a glimpse of Bellagio, on Lake Como. For the antiques there are several studies of the Parthenon and the Acropolis, at Athens, and a very striking presentation of the Acrocorinth in Greece,—a few standing columns of an old temple showing up in a dark value against the flaming slopes of the Acropolis which loom majestically behind.

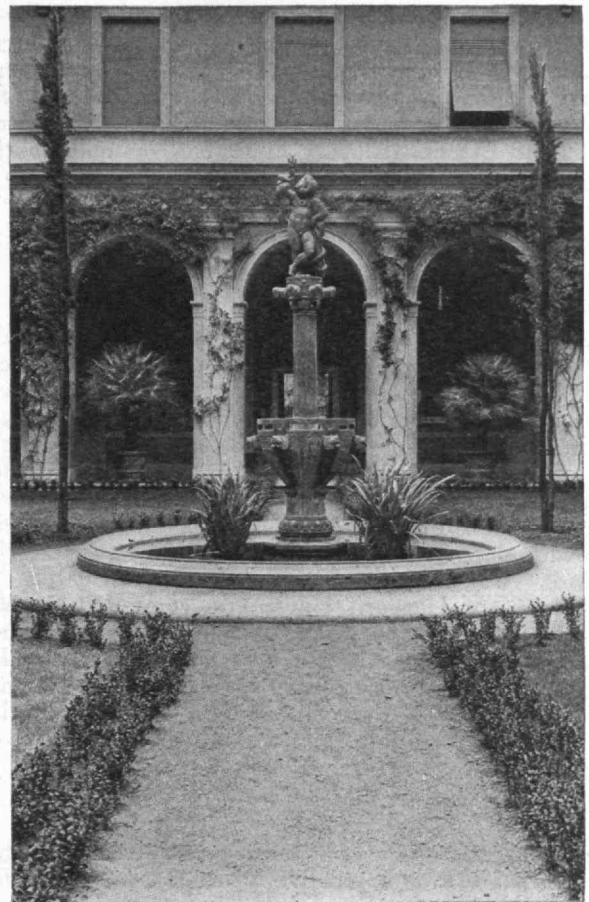
Lastly there is a gorgeous rendering of a preliminary study for the Restoration of the Jupiter Temple in Rome under the Etruscan Kings, which makes one envy the ancients for their privilege of living in such blazingly colorful surroundings.

The etchings of Rheims and Verdun are strong and modern in their handling and the few pencil drawings suggest the existence of a wealth of similar drawings not included in the exhibitions.

Altogether the show emphasized the peculiar fitness of the artist to act as director of a school for the study of the fine arts such as Fontainebleau, which is rapidly becoming the headquarters for serious American students of art in France.

Alumni News

American Architecture, which has suffered so many losses during the past year through the passing of a number of the more prominent practising architects, was again bereaved on February 14 through the death of Arnold W. Brunner, '79. Mr. Brunner left his imprint on the architectural work of his generation through a number of important public monuments in various parts of the country, notably the Cadet Hospital at West Point, the Capitol Park State Buildings and the Soldiers and Sailors Memorial Bridge at Harrisburg, Pa., and the Customs House and Court House at Cleveland. He was active in the affairs of many societies concerned with the fine arts, including the Architectural League of New York, the National Sculpture Society, the National Institute of Arts and Letters, the American Civic Association, and the Fine



IN THE CORTILE
Of The American Academy in Rome, showing
Paul Manship's fountain of the Infant Hercules

Arts Federation, of New York. He was, to quote *The American Architect*, "A man of most engaging personality, the finest breeding, and a rare knowledge of the profession he so well served." His death was "a distinct loss to the world of arts and letters."

Four members of the enterprising Class of 1923, J. E. Berla, W. J. Hennessey, Jr., P. S. Wadsworth and S. S. Setchell, have burned their bridges behind them and are at present traveling together in Europe; presumably for the purpose of studying architecture. Other recent graduates who have gone abroad are Donald C. Goss, '18, who departed about the first of February for several months in Italy, France and England, and William E. Meissner, '20, who has informed Professor Emerson that he expects to be able to remain on the other side for at least eight months.

An announcement recently received by the Department of Architecture tells of the formation of the firm of Frazier, Blouke & Hubbard, Architects and Engineers, in Chicago. Two of the members of this firm are Walter S. Frazier, '18, of Tech Show fame, and Pierre Blouke, '19.

R. B. Wills, '18, who has become well known in Boston through his contributions of small house designs to the *Boston Herald and Traveler*, and more widely known through his contributions of cartoons to "Pencil Points," has recently set up in business for the practice of architecture at No. 8 Beacon Street, Boston.

The Department was, not long ago, favored by a visit from John Taylor Arms, '11, who has of recent years been doing notable work in the field of etching. An exhibition of his etchings has been on view for several weeks in Goodspeed's Book Shop, on Beacon Hill, and has excited very favorable comment in the public prints.

Department News

An exhibition of pencil portraits by Emil Pollak-Ottendorf was hung in the Exhibition Room of Rogers Building from February 25 to March 14, inclusive. Mr. Pollak-Ottendorf, who painted the recently acquired Ware portrait, is the master of a surprisingly beautiful pencil technique as well as a fine feeling for portraiture as the work exhibited amply testified. Among his subjects were Philip L. Hale, the well-known painter who has taught for many years at the Boston Art Museum School, Professor Charles T. Copeland, of Harvard University, commonly known to undergraduates as "Copey," James Jackson, former State Treasurer of Massachusetts, and William H. Dunbar, a prominent attorney and distinguished citizen of Boston. There were also several charming studies of children, including William Dunbar and several of the children of A. F. Bemis, '93.

Alumni and friends of the Department of Architecture have made it possible for the Institute to offer two scholarships for the next summer at the Fontainebleau School, available for students in the third and fourth years, in good standing and showing proficiency in design. One of the requirements for these scholarships is that their holders must study in the Department during the year following their summer abroad. Work done in design at Fontainebleau under Professor Carlu will be credited, upon certification by him, towards the Institute's degree. Professor Emerson has also arranged for a prize of 1,000 francs to be awarded to the Institute student who does the best work in design at Fontainebleau next summer. The Department hopes that as many students as possible will take advantage of the close relations which have been built up between the two institutions through their common possession of M. Carlu's services. It plans to do everything it can to assist them to enjoy the privileges of studying for a few months at that most charming of French chateaux.

The new Institute catalogue will contain the announcement that any students or former students of the Department of Architecture traveling abroad will have special privileges in the American Academy in Rome, the American School of Classical Studies at Athens, the Architectural Association in London, and the Atelier Gromort, in Paris. They will be offered facilities in any of these establishments to prepare any measured or rendered drawings which they may care to make in connection with their studies abroad. This arrangement should be of material assistance to traveling students, who all too often in previous years had difficulty in finding space where they could carry on their work. The scholarship men have always been courteously and helpfully received at the American

Academy in Rome, but there were no definite arrangements as to where they could do their work in other cities of the Continent and in London. The present arrangement covers not only scholarship men but all other traveling students of the Department, and will be a welcome piece of news for any of the Alumni who are planning a European trip.

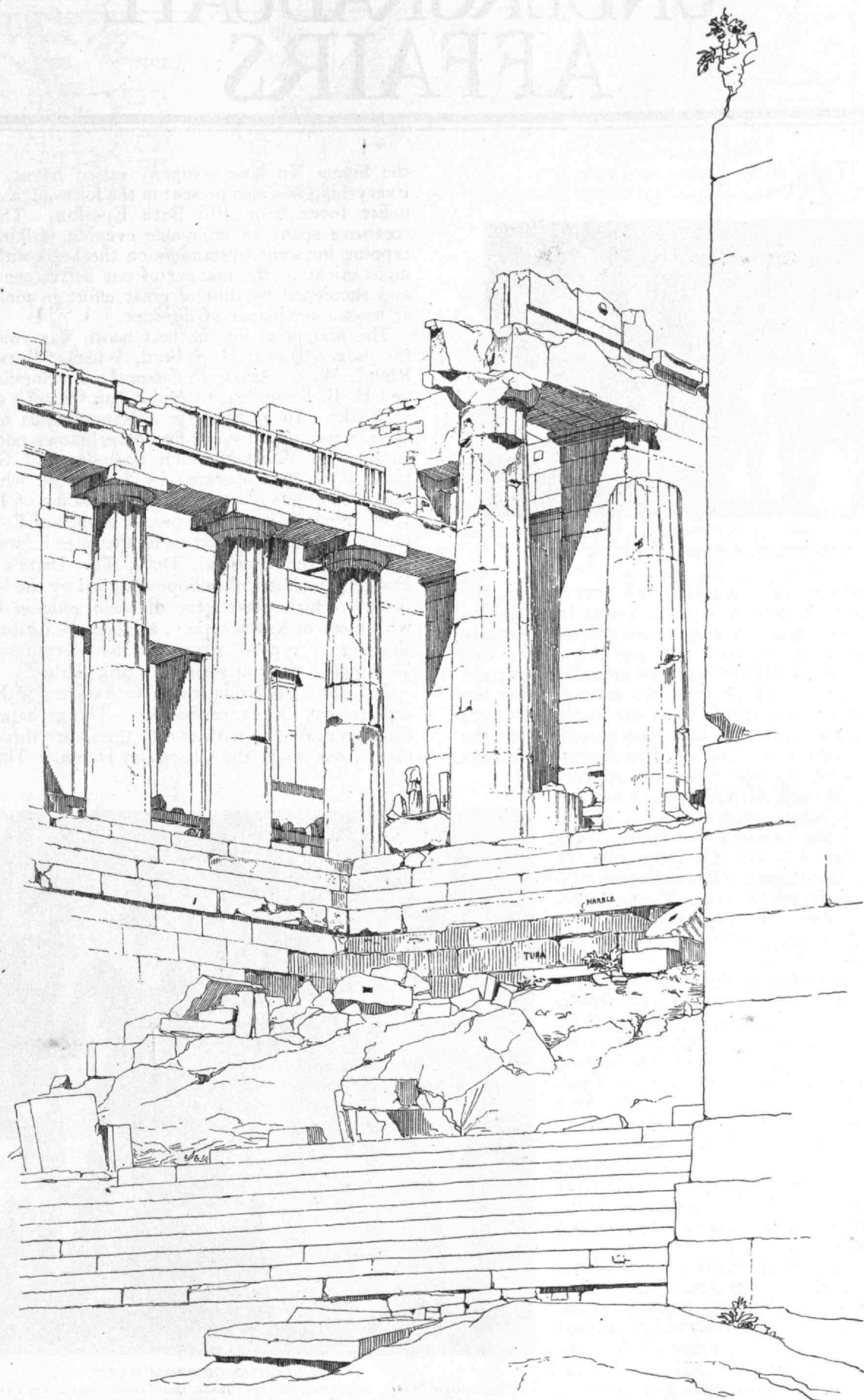
The results of the Despradelle Prize week-end conjunctive problem held February 28-March 2, again gave the honors to Technology over Harvard and the Boston Architectural Club. There was no first prize awarded, but the total of \$75.00 offered for the first and second prizes was divided between Donald S. Nelson, '28, Jesse W. Green, '25, and John H. Raftery, '24, who placed first, second and third, in the order named. The subject of the problem was "A Sanitarium." Nelson, by the way, who is a special student, has achieved the distinction of placing as second alternate in the first preliminary competition for the Paris prize.

The Secretary-Treasurer, in accordance with a time-honored custom, is apparently privileged, or condemned, to use a modest amount of space in each issue of the Bulletin, first, to thank effusively those members of the Society who have contributed their annual contribution towards the periodical expenses of publication (an act which is as pleasant in the doing as it is gracious) and, second, to make as heart-stirring an appeal as seems decent for further financial assistance; this to come, of course, from those who have not yet unlimbered their check books in our behalf. Having read somewhere that "a word to the wise is sufficient," and supposing that all of our readers are desirous of being listed in the category of wise persons, we will pass rapidly to our next slide, Mr. Goodwin, and say that contributions of money are not the only kind of contributions that we would like to see contributed.

It would seem as though such a large and versatile gathering as we have before us this evening should number among its members some who are men of notable achievement, some who have been doing big things, which might presumably be amusing to their brethren if suitably embellished with literary car-touches, garlands, egg and dart mouldings and chiaroscuro.

It is, of course, beyond the reasonable limits of expectation (or should it be the limits of reasonable expectation?) that we might expect any of our subscribers to write to us freely and unsolicited of their own achievements, architects as a class being unreasonably, aye, notoriously, modest. And yet your poor Secretary-Treasurer, as he gleans the few items which leak out from time to time into the daily press, and bends his ear to catch the whisperings that sometimes rise up out of the world spread far below his office window, cannot help but sigh now and again and wonder if there is no way of securing a little hearty coöperation in the business of getting news. (In other words, no way of getting others to do his work for him.)

All of which means that we would welcome suggestions of sketches, etchings, rendered drawings, lithographs, photographs, architectural monographs, travelogues, in short anything which might be reasonably included in our pages and help us to show the world what Technology architects are up to.



THE PROPYLEA OF THE ACROPOLIS AT ATHENS

From the drawing by Francis H. Bacon, '77. Reproduced by courtesy of Pencil Points

UNDERGRADUATE AFFAIRS

The Circus Comes to Town



Photo by H. B. Willoughby (Courtesy of The Tech)
THE WHISKEY GULCH BARROOM

After months of discussion and preparation, the Institute Circus, edition of 1925, has at last come to pass. Advancing spring weather became unexpectedly weak-chinned on the great day and icy blasts tore down from the north and whistled around the corners of the pylons in such business-like attitudes that the parade had to be omitted in order not to tear to tatters the bizarre costumes that had been prepared for the evening performance. The weather, however, perhaps added impetus to the headlong appearance of the blatant *Mop*, this year's scandal sheet, which lagged ever so weakly in the footsteps of the parent *Filter Paper*. Like many another follower *The Mop* did not attain the same degree of Longfellowish sublimity as did its predecessor. Personal allusions were far too few and too mild in their rancor to furnish the smile that stings. But to the show.

The circus was intended to be strictly a masculine affair so the unexpected sleuth-like entrance of an unnamed young lady, rumored a coed, who in the garb of a clown evaded the husky guardsmen of the barrier, caused consternation to say nothing of palpitation in the hearts of many of the younger Morris Gestes. When the rumor began to circulate that a young lady had made a Petronian entry, there was great frustration and running about until the arch villainess was unmasked and left the premises. After this regrettable episode the circus proceeded its bully way.

During the evening nearly 1500 students paraded the Cambridge Armory at peril to life and limb from clashing, dashing fire departments and ambulances which seemed to be operated on the principle of the more damage done the greater credit to the municipality. In particular the high powered quarter-inch stream of distilled water from

the Sigma Nu hose company raised havoc. Auntie Everything was also present in the form of a stalwart police force from Phi Beta Epsilon. These fell creatures spent an enjoyable evening walking about tapping innocent bystanders on the head with rubber night sticks in the manner of our better gendarmerie and succeeded by dint of great effort in maintaining at least a semblance of disorder.

The first prize for the best booth was awarded by the judges, Bursar H. S. Ford, Assistant Bursar D. L. Rhind, W. C. Ames, Professor L. F. Hamilton, '14, and H. B. Kane, '24, to Alpha Tau Omega's sideshow of freaks. In addition to this monstrous collection there were some twenty-five other shows notably including the Whiskey Gulch Barroom and Gambling Hall, a museum operated by Sigma Chi which contained as objets d'art the original beaker of Professor J. W. Phelan, '94, and a pair of Professor L. M. Pasano's sneakers, reputed to be the ones he wore when he wrote the Preislid, Delta Tau Delta's African Dodger, an electrical calliope designed by the Electrical Society which played the diatonic scale in C major with more or less accuracy, a House Beautiful exhibit showing a typical room in the dormitories, and *Technique's* tintype manufacturing parlor.

At eight o'clock ring stunts were started with a mock drill by the Ordnance Society. Things happened in confusing rapidity with two or three rare thrilling moments, one when the Champion Hammer Thrower of



"THE DUCHESS OF BROADWAY"

A form slightly less, by present day standards, than divine, but a face that easily accounts for the above ardor. Tech Show 1925 goes on the boards at Somerville, New York, Hartford and Northampton as this issue of *The Review* is being printed

the World let go his little plaything into the crowd and it fortunately turned out to be rubber, and a second time when the supremacy of the well-known horse Pegasus was challenged by *Voo Doo's* recently imported Horny Ella, the African Elephant.

By far the most exciting moment of the whole evening, however, occurred near the end during the chariot race between Theta Delta Chi and Phi Beta Epsilon. As the rival wagons thundered down the stretch, their drivers pulled a Ben Hur on one another and chaos reigned supreme for almost a minute. Phi Beta Epsilon won the run-off.

All in all, the circus showed what a perfectly bewildering array of talent lies undiscovered in the undergraduate body and bore out the committee's contention that there would be something doing every minute, seven to eleven at the Old Armory.

Crew

"If the Junior Varsity beats the Navy, I'll have a brass band at the station and if both the Junior Varsity and the Varsity win their races, then I'll bring the brass band, the whole student body, and flowers to meet them at the station," blythely promised Dan Sayre, '25, at the crew banquet held last January. Mr. Sayre made this promise openly in the presence of witnesses and although he did not indicate his method of undertaking to fulfill his promises, none arose to heckle and he was tendered applause instead. Coach Haines in a more restrained manner told the Alumni Council

several weeks later that it was his ambition to soon send a crew to England to compete for and *win* the Grand Challenge Cup. "If not this year, then in 1926," he said.

While the veracity of these two gentlemen has not been queried, so far as we know, it is probable that the 1925 season will witness the accomplishment of but a portion of their hopes. Still, one year ago, if either they or anyone else had predicted the victory over Cornell or the showing made by the Technology Varsity in the Olympic tryouts he would have been accused (to import a widely current idiom) of being a word in four letters meaning one who is coy with the truth. This year more men are out for crew, more and better equipment is available, all but one of those in the Varsity as boated at present are letter men of last year, and Coach Haines and his associates have a background of a year's experience with these men. For example of the interest and endeavor of but one group take the Freshman situation. Five 1928 crews rowed up and down on each of the warm days during the first week early in March. More Freshman crews were organized, seven or eight had been practicing on the machines during the winter, but they could not all be boated at the same time on the river.

The chief event of the schedule is a quadrangular race to be held May 9 on the Charles when the Varsity meets Harvard, Cornell, and Pennsylvania. Two weeks before this they row the Navy on the Severn and on May 16, Columbia on the Harlem River. The Junior Varsity also meets the Navy on April 25, and Princeton on May 2.

Athletic Results to March 10

BASKETBALL

- Feb. 11—Tufts, 23; M. I. T., 17, at Hangar Gym.
Feb. 14—Northeastern, 29; M. I. T., 23, at Hangar Gym.
Feb. 18—Brown, 39; M. I. T., 20, at Providence.
Feb. 21—M. I. T., 29; Boston University, 21, at Boston.
Feb. 25—Clark, 29; M. I. T., 26, at Hangar Gym.
Feb. 28—University of New Hampshire, 28; M. I. T., 23, at Durham.

BOXING

- Feb. 14—McGill, 5; M. I. T., 1, at Montreal.
Feb. 21—M. I. T., 3; Colgate, 3, at Hangar Gym.
Feb. 28—M. I. T., 5; Boston University, 1, at Hangar Gym.

FENCING

- Mar. 2—Bowdoin, 7; M. I. T., 6, at Walker Gym.
Mar. 7—Harvard, 10; M. I. T., 3, at Hemenway Gym.
Mar. 10—M. I. T., 11; Dartmouth, 2, at North Hall, Walker.

GYM

- Feb. 14—U. S. N. A., 50; M. I. T., 4, at Annapolis.
Mar. 7—Dartmouth, 33; M. I. T., 21, at Walker Gym.

HOCKEY

- Feb. 18—Yale, 4; M. I. T., 0, at Boston Arena.

RIFLE

- Feb. 21—M. I. T., 1894; Harvard, 1693.
Feb. 21—Yale, 1897; M. I. T., 1884.
Feb. 28—Williams, 1873; M. I. T., 1625.

SWIMMING

- Feb. 21—Williams, 45; M. I. T., 14, at Williamstown.
Feb. 28—Wesleyan, 53; M. I. T., 15, at Middletown.
Mar. 7—Brown, 47; M. I. T., 21, at Boston Y. M. C. A.

WRESTLING

- Feb. 14—Syracuse, 17; M. I. T., 6, at Syracuse.
Feb. 21—Brown, 16; M. I. T., 13, at Providence.
Feb. 28—M. I. T., 22; Norwich, 3, at Hangar Gym.
Mar. 7—Lehigh, 19; M. I. T., 6, at Bethlehem.

A Calendar of Future Sports

- Apr. 24 & 25—Track—Penn Relays at Philadelphia.
Apr. 25—Crew—Varsity and Junior Varsity—U. S. N. A., on the Severn. 150-lb.—Union Boat Club on the Charles.
May 1—Tennis—Williams at Williamstown.
May 2—Crew—150-lb.—Princeton at Princeton. Junior Varsity—Union Boat Club, on the Charles.

- May 2—Tennis—Cornell at Ithaca.
Track—Princeton at Princeton.
May 9—Crew—Varsity and Junior Varsity—Cornell, Harvard, and University of Pennsylvania, on the Charles.
Tennis—Brown at Providence.
Track—Harvard at Harvard Stadium.

NEWS FROM THE ALUMNI CLUBS

Technology Club of Central Pennsylvania

The Annual Dinner and meeting of the Tech men in this district was held at the Engineers' Club in Harrisburg, February 7. In the opinion of the older men who have been intimately connected with the Club's struggle for a successful existence, this affair was the best that has been held in many years. Thirteen Alumni were present, representing all parts of this territory. Incidentally, the only regret voiced during the evening by anyone was that Orville B. Denison was not with us again.

Professor George B. Waterhouse, in charge of the Course in Metallurgy at the Institute, came down from Cambridge to visit the Club and to see some of his friends connected with the steel industry near here. If he derived as much pleasure from his two days here as we did from hearing him, the Institute's plan of having professors attend club meetings in different sections should be acclaimed as faultless from all points of view. Professor Waterhouse related all that has happened at Tech since we had a visit from the Executive Secretary last year and also all that might happen in the near future. At the same time, he presented a viewpoint that was new to most of us; namely, that of an eminent authority entering the faculty at M. I. T. without first having gradually absorbed all its theories and customs as is the case with most of the Tech graduates who are members of the instructing staff. In this way, he has gathered impressions of Tech and Tech men as others see them, not as we see them ourselves—a line of observation that should be of great assistance to the advancement of the Institute.

John L. Stewart, formerly of Lehigh University and now with the Pennsylvania Public Service Commission, was also our guest, and with his shrewd criticisms and observations, he pointed out enough obstacles still in the path of the engineering profession in its present state to keep Tech men pondering and striving for many years to come. He has a fund of personal views and theories that are remarkable for their scope and for the wit with which they are expressed and applied. Farley Gannett, the President of the Club, supervised the arrangements, introduced the speakers and did his best to goad Mr. Stewart into further diatribes against the unholy alliance of law and engineering. To Professor Waterhouse, Mr. Stewart, Mr. Gannett and to the Tech men who came from distant points to attend the dinner, the meeting owes its success. No change was made in the officers of the Club.

J. R. Elliott, *Secretary*,
1420 Walnut Street, Harrisburg, Pa.

The Technology Club of New Bedford

The twentieth anniversary dinner of the Club was held on Friday, February 6, at the new Wamsutta Club, with forty-four members and guests present, the largest number that ever attended one of our annual affairs. Professor Robert E. Rogers of the English Department of the Institute, and Dennie, the Secretary-Treasurer of the Alumni Association, favored us with their presences as speakers. Featuring the get-together which preceded the banquet was the initial appearance of Hanley, Wardwell, and Stanton, '24, who have just located in New Bedford.

Promptly at 8 p.m. the gang moved down to the dining room where table T was reserved for us. Dennie opened the festivities with a Tech cheer and then Charlie Wing read a few fake telegrams.

Next followed a cross-word puzzle exam with the Secretary as professor in charge. Everybody flunked, but for especially good work Dennie and Charlie Wing were awarded cross-word puzzle socks as first and second prizes, respectively.

After the excitement of this affair, the Technology Club Eight Ensemble (reduced to a septette) consisting of Akin, Beaman, Stetson, Earle, McIntyre, Jewett, and Steele, at the melodeon, sang the Stein Song with good effect. Then followed a selection by The Mystery Four, consisting of Charlie Wing, Jewett, Tallman and Gillingham. As they were disguised, their identity was presumably unknown to the members. Their offering received great applause. Alternating with serious and light compositions respectively, the Septette and Mystery Four entertained until the end of the eats.

After demi-tasse, President Stetson introduced Professor Rogers who immediately launched a clever barrage of repartee aimed at Dennie, some of our members and our own dear Florodora Sextette. Reverting to a more serious vein, Professor Rogers told us in a charming manner about the great development of the English courses at the Institute and the prospects for future expansion of its activities.

Dennie then told us all about the plans for the coming June

Reunion and made a plea for sustaining membership in the Alumni Association. With melodeon accompaniment he entertained with several clever songs one of which, "Way Down in New Bedford" (a parody on "Way Out West in Kansas"), made a great hit. An exhibition and sale of clever caricatures made by Fred Earle's son closed the evening's entertainment.

A list of those seated at table T follows:—Professor Robert E. Rogers; Orville B. Denison, '11; J. A. Stetson, '09; E. J. Hanley, '24; C. H. Wardwell, '24; J. J. Stanton, '24; J. M. Chace, Jr., '08; C. F. Wing, Jr., '08; W. L. Learned, '08; J. S. McIntyre, '08; E. B. Hammond, '73; F. E. Earle, '06; S. C. Hathaway, '87; E. H. Wing, '07; D. H. Gillingham, '13; R. A. Swan, '07; F. G. Jewett, Jr., '16; F. B. Akin (Lowell School of Design); F. F. Hutchings, '07; W. H. Fox, '97; C. M. Hussey, '80; B. C. Tripp, '97; F. E. Busby, '97; C. F. Lawton, '77; C. R. Hunt (Special); G. Walmsley, '20; C. A. Vose, '07; D. Brown, Jr., '10; E. H. Steele, '15; F. M. Babbitt, '19; A. W. Milliken, '22; R. L. Wing, '10; G. H. Nye, '85; E. R. King, '99; P. E. Young, '09; C. S. Ashley, Jr., '11; W. Tallman, '15; A. R. Pierce, '91; D. W. Beaman, '96; C. L. Faunce, '88; J. A. Luce, '18; and C. P. Hawes, '16. A. F. Nye, '15, attended the get-together only and A. G. Pierce, Jr., '85, was with us in spirit as he was unable to attend personally.

Ira M. Chace, Jr., '98, *Secretary*,
131 Bedford Street, New Bedford, Mass.

The Technology Club of Cincinnati

The Club held a very successful meeting, January 30, 1925, at the Wyoming Club. A report of the activities of the scholarship committee was presented. Richard W. Proctor, '94, the Chairman of the committee, died suddenly on December 7, 1924. He had prepared a valuable report on the methods of raising and awarding local scholarships in the various Technology Clubs and in the alumni groups of other colleges. He had also secured the support of a small group of Cincinnati Alumni who were willing to back the plan to an extent sufficient to assure its success for the first year. It was voted that a scholarship be established open to graduates of schools in Hamilton County, Ohio, and that in recognition of his valuable work in behalf of the scholarship that it be called The Richard Warren Proctor Scholarship. Also, that the Executive Committee be authorized to appoint a scholarship committee with power to raise funds and to award the scholarship for the school year of 1925-26. It is proposed to raise a scholarship of \$350 for the coming year by subscriptions from Cincinnati Tech men, ranging from \$50 to \$2, and it is hoped that every Tech man in Cincinnati will participate.

The following officers were elected for the coming year. President, H. B. Luther, '08; Vice-President, Cecil F. Baker, '07; Secretary, F. W. Morrill, '07; Treasurer, Oliver L. Bardes, '22; Executive Committee A. P. Mathews, '92; S. M. Manley, '00; John Nolan, '04.

It was voted to change the name of the Club to The Technology Club of Cincinnati. The rest of the evening was devoted to bridge and bowling.

The Executive Committee at a meeting on February 17, appointed the following committee on scholarship: Messrs. C. G. Merrell, '88, Chairman; Stuart Miller, '07, Rudolph Tietig, '98, Herman Lackman, '05, John Todd, '23.

Regular luncheon every Tuesday 12.30 to 2.00 at the Chamber of Commerce, Room B.

F. W. Morrill, '07, *Secretary*,
3rd and Elm Streets, Cincinnati, Ohio.

Berkshire Technology Club

The rare treat of having a former ranking officer of the criminal investigation department of the United States Army relate personal experiences gained during extensive service in France during the World War, was given members of the Berkshire Technology Club and their guests, members of the Reserve Officers' unit on February 3, in the Wendell Grille, when Major C. E. Russell of New York held seventy-five persons spellbound with seemingly incredible tales of the capacity for cunning of the human mind. Major Russell's talk was preceded by an informal dinner served at 6:30. J. McArthur Vance, '91, President of the Club, presided as toastmaster. Major Russell was the only speaker.

The Major, an army veteran of many years' service, which began as a private in the ranks, plunged into his subject with a pleasing lack of formality. His stories of actual experience were prefaced by remarks concerning the so-called secret service of the army.

"The espionage and intelligence sections of the United States

Army are very essential parts of it," said the major. "In the first named branches of the service, the work of the members is necessarily in the enemy country where general information is gathered for the use of the army. In the counter-espionage work, the efforts of enemy agents are combated. The intelligence sections operate more intimately with the army itself and must deal with information largely pertaining to troop movements, and so on."

The Major then went on to give some ideas of the methods used by enemy spies in carrying information. The Major's manner in telling was that of a man stating facts with no attempt at personal glorification. He is a civilian now and is at liberty to tell the stories which he had a part in making.

He is coöperating with the army in its efforts to secure a real espionage system and is giving a course of lectures in espionage and intelligence work to a large class of reserve officers in New York. He also carries on a number of private investigations in addition to his writing.

We are planning to bring to Pittsfield each month leaders in various fields of endeavor. About forty members were present at this February dinner.

John M. DeBell, '17, *Secretary*,
120 Dodge Avenue, Pittsfield, Mass.

Technology Club of New Hampshire

The midwinter dinner and annual meeting of the Club was held at the Hotel Carpenter, Manchester, N. H., on Saturday evening, February 21. Our guests were Dennie, whose presence always assures an interesting gathering, and Mr. W. Parker Straw, the agent of the Amoskeag Mills. Dennie told us the plans for the All-Technology Reunion in June, and of all the various activities of the Alumni Association and of the undergraduates. More than that, he brought down the house with several of his inimitable "classical" songs. Mr. Straw, who admitted that he was a graduate of Harvard University, more than made up for it with an exceedingly interesting story of his recent observations of business and social conditions in Europe. With Dennie at the piano, we all joined in on some of the old familiar songs, and ended the evening by starting a cablegram to our beloved president, E. W. Rollins, '74, now in South America.

The officers elected for 1925-26 are: President, E. W. Rollins, '74, of Dover; Vice-Presidents: Arthur O. Roberts, '04, Manchester; Frederick E. Everett, '00, Concord; Victor S. Phaneuf, '21, Nashua; Secretary-Treasurer: Arthur R. Holden, '23, Manchester; Representative on the Alumni Council: Norwin S. Bean, '94, Manchester.

The members of the Club present were W. M. Africa, '15, Lawrence Allen, '07, N. S. Bean, '94, G. M. Belcher, '08, John C. Chase, '74, W. D. Davol, '06, L. W. Emerson, '22, S. L. Flanders, '74, W. C. Forbes, '20, L. B. Gould, '03, A. A. Holden, '99, Victor S. Phaneuf, '21, A. O. Roberts, '04, H. A. Smith, '11, H. E. Thompson, '04, L. A. Thompson, '05, J. A. Urquhart, '11, and H. S. Wonson, '07; and our guests were Mr. Orville B. Denison, Class of 1911, and Mr. W. Parker Straw of Manchester.

Harold S. Wonson, '07, *Secretary-Treasurer*,
W. H. McElwain Co., Manchester, N. H.

Washington Society of the Massachusetts Institute of Technology

At the regular speaker luncheon on February 13, Dr. David White, Chairman of the Division of Geology and Geography of the National Research Council, spoke on the work of the Council and told us especially of the work of his own division. He is a very pleasing speaker and gave a most interesting talk. About thirty-five men were present. Letters from Mr. Booth and from Denison were read, urging sustaining memberships in the Alumni Association and also calling attention to the All-Technology Reunion, June 11 and 12.

W. M. Corse, '99, *Secretary*,
937 Investment Building, Washington, D. C.

Technology Club of Hartford

The Club is enjoying its semi-monthly luncheons as usual and we have been favored by some exceptionally good speakers. Mr. Charles P. Howard, Class of '74, told us what to look for at the total eclipse of the sun and his talk was very entertaining. We were also favored by having Captain McMillan for our guest a very short time after he returned from the Arctic Ocean. In January, we held a joint luncheon with the Cornell Club, with about twenty-five present from each club. This was our second luncheon with Cornell and both have proved very enjoyable. Cheers and songs were given by the respective clubs.

We are now looking forward to the Tech Show which we are making arrangements to give at Parson's Theatre, Monday evening, March 23. This will be the third time the Tech Show has been given in Hartford and we anticipate making it a greater success this year than in the two previous years.

G. W. Baker, '92, *Secretary*,
Box 983, Hartford, Conn.

The M. I. T. Club of Akron

A joint meeting with the Cleveland Club was held on January 10, in Akron. About thirty-five men, headed by President Merryweather came down from Cleveland by special bus.

The afternoon was very interestingly and enjoyably spent by the members of both clubs by taking an inspection trip through the aeronautical department of The Goodyear Tire and Rubber Company and afterwards indulging in bowling, pool, and bridge at the Goodyear Club House.

In the early evening the fellows assembled at The University Club, where they enjoyed a good dinner with entertainment between the courses. The dinner was not only topped off with cigars, but also with a very interesting talk on Lighter-Than-Air-Craft Development, by P. W. Litchfield, '95, Vice-President and General Manager of The Goodyear Zeppelin Corporation.

For the success of this meeting, considerable credit is due the following committee: A. K. Whitaker, '23, Chairman; W. E. Gladding, '23, R. P. Schreiber, '24, J. B. Maxwell, '25, J. R. Mares, '24, C. W. Greening, '22, and F. G. Skeyhan, '24.

At the business meeting of the Akron Club, the following officers were elected for the year of 1925: W. S. Walfe, '12, President, and Parry Keller, '15, Secretary-Treasurer. Professor R. T. Haslam, '11, was re-elected Akron representative on the Alumni Council. The retiring officers W. H. Fleming, '16, President, and L. H. Burnham, '21, Secretary-Treasurer were given a rising vote of thanks as an expression of the Club's appreciation of their splendid work during the past year.

Parry Keller, '15, *Secretary-Treasurer*,
Goodyear Tire and Rubber Company, Akron, Ohio.

The Technology Club of Philadelphia

On the twentieth of February the Club held a combined card party and dance, thereby celebrating Washington's Birthday. Many members, graduating in the '80's and '90's, protest when dancing is suggested. It was the desire of the committee to have these members present and consequently as much stress was laid on cards as on dancing. After the affair was well underway, we were much surprised to find the aforementioned protestants dancing with as much vigor and grace as the members of the Class of '24. The cards were practically neglected. We attribute this state of affairs to the wonderful music furnished for the occasion, and the theory that tired and aching gray matter prefers music to any form of mental concentration.

There were two lucky number dances and several prizes distributed in each. The first prize in each case overshadowed all others. The most graceful dancers were J. W. Aylsworth, '03, E. J. Mink, '22, A. H. Kingham, '20, Arthur Craig, '22, and many others.

Toward the latter part of the evening a little interest was shown in cards. This occurred just in time to save the one remaining prize for the best player of bridge.

There were many notables present including Dexter A. Tutein, '17; Jerome G. Harrison, '06; Percy E. Tillson, '06; Walter J. Beadle, '17; and William B. Flynn, '99. The weekly luncheons are well attended. All Technology men are invited to attend these affairs every Thursday at 12:30 p.m., in Wanamaker's Tea Room.

H. Arthur Grosscup, '20, *Secretary*,
5th and Race Streets, Philadelphia, Pa.

Technology Club of New York

The New York Technology Club announced two major events for the month of March: the Annual Alumni Dinner, Friday evening, March 20, at the Waldorf-Astoria Hotel and the New York performance of the 1925 Tech Show, Tuesday evening, March 24, also at the Waldorf-Astoria.

Robert J. Marlow, '17, *Executive Secretary*,
17 Gramercy Park, New York, N. Y.

Technology Club of the Merrimack Valley

A meeting of the Club was held at the Hotel Marlborough, Lowell, Mass., on Thursday evening, January 15. An excellent dinner was served at 6:45 to nineteen members and three guests. Messrs. Taggart, Davison and Knowles of the Musical Clubs entertained the gathering. The question of bringing the Musical Clubs to Lowell for a concert and dance was discussed for some time. Finally it was decided to bring the Combined Clubs to Lowell on February 13, 1925. A committee of seven was appointed to supervise the affair. It was composed of the following: Dr. John H. Lambert, '98, President of the Club, William C. Ready, '21, Secretary, Paul J. Choquette, '22, Frank J. O'Neil, Prof. Edgar H. Barker, '96, and Charles O'Donnell, '21, all of Lowell; and Edward F. Praetz, '21, of Lawrence.

William C. Ready, '21, *Secretary*,
10 Bertha Street, Lowell, Mass.

NEWS FROM THE CLASSES

News from even-numbered classes is published in issues dated November, January, March and May. News from odd-numbered classes is published in issues dated December, February, April and July. The only exceptions to this rule are those classes whose Secretaries have guaranteed the appearance of notes in every issue. These classes are: 1895, 1896, 1900, 1901, 1902, 1905, 1907, 1910, 1911, 1912, 1914, 1915, 1916, 1917, 1918, 1919, 1921, 1922, 1923, and 1924. Other classes adhere to the alternate schedule. Due to strict limitation of space, *The Review* is unable to publish lists of address changes of members of the Association. The Alumni Office, in Room 3-209 M. I. T., will supply a requested address or will act as the forwarding agent for any letters addressed to members of the Association in its care.

'75 Do you realize that in June next it will be fifty years since the graduation of the Class? It is proposed that something a little different from the ordinary annual meeting shall be attempted, and that the date of said meeting shall be fixed at the time of the All-Technology Reunion in June. At the time of writing it is too early to get definite answers as to who will come, but it looks as if some who have not attended a meeting for many years may be with us. Keep this in mind, and arrange to be in Boston, June 11 to 15 inclusive. Details of the Class Meeting will be sent later to those interested.

Shockley writes that owing to a shock of apoplexy he will not be with us. His address is 1168 No. Edgemont St., Los Angeles, Calif. H. L. J. Warren has returned East, and his address is 1019 Beacon St., Brookline. Hibbard has changed his address to 33 Crawford St., Dorchester.

I regret to announce the death on December 13, 1924, of our classmate, Frank Dabney.

E. A. W. Hammatt, *Secretary*,
South Orleans, Mass.

'81 The Secretary has just learned through the efficient bureau of the Alumni Association of the death of David S. Goddard on August 15, 1923.—Harold E. Stearns passed away on January 24, 1925. Harry had not been in good health for the past few years. He was born in 1859. Since 1880, he had been in Canada, where he was Treasurer of the Dominion Wadding Company. He leaves a widow, a son and daughter. He was a member of several social clubs. This leaves only fourteen living graduates—just fifty per cent.

Frank H. Briggs, *Secretary*,
390 Commonwealth Avenue, Boston, Mass.

'83 No notes from Class '83. All notes of members of the Class are in the bank drawing interest. Any night you listen over the radio you can hear 'em draw! That's what I say. Draw *Interest*, don't you understand? The members of '83 are hard boiled. When you speak of interest, they know what you mean. They have reason to know; yes, sir. The Secretary also has reason to know that they are hard boiled. They are no chickens; they are hard boiled eggs, every one of 'em. Yes, sir. I know and I have paid for that knowledge over many years—let's see, 1883-1924, seventeen plus twenty-four, by calculus, still equal to forty-one, unless Einstein has mused it up. I hope he has, I don't like to think about it—all those years, all that money, all those postage stamps and good white paper wasted!

Harvey S. Chase, *Secretary*,
256 Beach Drive, St. Petersburg, Fla.

'89 The Secretary had an opportunity to get a glimpse of Big Business in New York the other day when he took lunch with Frank Dame, President of the North American Company. The Classmates will be glad to know that the trouble with Frank's old wound which bothered him so much for several years has been practically overcome. Incidentally, an opportunity appeared to learn the true story of the origin of that wound, which perhaps many of us had never heard. The following story is from the *New York Evening Post* of December 29, 1924:

"In the dignified surroundings of his office on lower Broadway, Frank L. Dame, President of the North American Company, impresses the visitor as a quietly exact but always courteous executive. One would never guess that he had lived a rugged life in the West mastering his profession from the ground up. One is amazed, therefore, to learn that the turning point in Mr. Dame's career was a pistol duel with a desperado. That all-important conflict took place when Mr. Dame, as a young man of thirty, was general superintendent of the Tacoma Railway and Motor Company.

"Mr. Dame's left arm is noticeably stiff, and during conversations he frequently rests it on the back of his chair. That is all part of the story. It is the result of a bullet wound.

"Something had gone wrong on the line and Dame set out on one of the company's cars to make a tour of the loop. A few miles out

of Tacoma the trolley climbed a steep hill fringed by woods. Dame joined the motorman at the front of the car. Then, near the top of the hill, a man stepped out of the woods. He wore a blue bandanna, pierced with eye holes. Drawing a gun on Dame and the motorman, he ordered the car to stop.

"After Dame and the motorman had been forced into the baggage compartment in the rear, the highwayman began searching the passengers. Then Dame saw an opportunity to use a gun in his pocket, left there from the night before. Peering out, he noticed the highwayman drop his eyes every time he searched a passenger. Dame opened fire, receiving instantly a shot in return. The duel lasted about two minutes, when the highwayman rolled off the car dead. Dame had been painfully wounded.

"The bandit was later identified as Jack Case, notorious train robber and highwayman—the only man on record to hold up single-handed a Southern Pacific train. That pistol duel had the greatest influence on his life, Dame says. It attracted attention and taught him that 'you can play the other man's game if you don't let his reputation lick you.'

"Dame was educated to be a civil engineer and started in construction work. Despite his desire to stick to that line, he was repeatedly forced into operating properties. He has spent his life in managing, developing, reconstructing and financing public utilities all over the country. As head of the North American Company, the largest public utility holding company in the country, his knowledge and experience are of great value.

"Dame was graduated from the Massachusetts Institute of Technology in electrical engineering. He started his career as a beginner in the testing room of the Westinghouse Electric Company at \$22 a month. Then came a construction assignment at Newburgh, N. Y. Later he was sent to Portland, Ore., as the Westinghouse Company's Portland engineer. When the Portland office was closed a year later, Dame went to Vancouver, B. C., to operate the Vancouver Railway and Light Company as general superintendent. He returned to Portland as engineer in the lighting department of the Northwest Thomson-Houston Electric Company.

"He became associated with the General Electric Company, which he served successively as general manager of the Seattle Consolidated Street Railway; general superintendent of the Tacoma Street Railway and Motor Company; general manager of the Union Electric Company; engaged in railway operations and lighting in Dubuque, Iowa; engineer of the Electric Securities Corporation, and finally Vice-President of the Electric Bond and Share Company.

"Late in 1912 Dame, with associates, bought Utah and Idaho Power Companies for a merger with the Telluride Power Company to form the Utah Power and Light Company. He retired from the Electric Bond and Share Company to take a long vacation in Florida. On his return he became connected with the Harrison Williams Companies. In 1921 he was elected President of the North American Company.

"Out of his busy life Dame has developed a sound philosophy. 'Keep a sense of humor,' he says. 'Don't undervalue your own services, yet never think you are indispensable.'"

An interesting letter has come in from Davenport who has a genius which is rare now-a-days of being a good correspondent for the fun of it alone. He is living now at 2730 Stuart St., Berkeley, Calif., and his comments on California surroundings, particularly in the way of architecture are most delightful.

Frederick Crabtree, Head of the Department of Mining and Metallurgical Engineering at Carnegie Institute of Technology, died on Saturday, February 14, at St. Petersburg.

Professor Crabtree was born in Bramley, York, England, in 1867, and came over to this country in his boyhood. In 1894, he married Mary O. Moore of McKeesport. He was a chemist with the Illinois Steel Company in 1889 and with the National Tube Company from 1890 to 1900; he was superintendent of the Western Steel Company, 1900-1901, and later superintendent of the blast furnaces with the Colorado Fuel and Iron Company until 1904; he was Professor of Mining and Metallurgy at the Colorado College, Colorado Springs from 1904 to 1906; in 1906, he went to Pittsburgh to join the staff of Carnegie Tech.

1889 Continued

Crabtree was a member of the American Institute of Mining and Metallurgical Engineers, American Iron and Steel Institute, American Electro-Chemical Society, American Society for Steel Treating, Engineers' Society of Western Pennsylvania and of the British Iron and Steel Institute.

He had not been well since last fall, and due to his ill health had been granted a six months' leave of absence. He went to Florida about two weeks ago, and his death came as a shock to his numerous friends. He was one of the most popular members of the Carnegie faculty and his place will not easily be filled.

Walter H. Kilham, *Secretary*,
9 Park Street, Boston, Mass.

'91 The Alumni Association is very anxious to increase its membership to carry on properly the good work which has been started. The Secretary sent out some letters on this subject and all those connected with the Class who have not yet joined the Alumni Association are urged to send in an application for membership. The records show that the Class stands tenth in the percentage list with a membership of seventy-one, which is about 30% of those enrolled in the Class. The class at the head of the list only has about 35%. Let's see if we cannot be at the top, where, of course, we belong.

The Secretary is in receipt of a very interesting letter from George Hooper who is now located in Los Angeles. The letter, which follows, leads the Secretary to feel that George will turn over the key to the city to any '91 man who happens to visit that wonderful metropolis. The Secretary can state from personal experience that there are other things besides the climate which are quite worth while. "I settled here a little over a year ago through a combination of circumstances which all were most unexpected. After my discharge from the Army I returned to my home in New Jersey with my family and we attempted to get again into the usual routine. I reopened my office and resumed my work. Business was easy to secure but hard to carry on, due to the generally upset business conditions—too well known to require explanation. My partner suffered a stroke of paralysis which ended his services and my wife had a nervous breakdown as a result of her exertions and the nursing of all of our children through the epidemic of flu.

"Conversation with banker friends gave me a pretty good idea of what was going to happen to business generally, so I decided to 'lay off' and have the first real rest in about twelve years. I rented my home and we flipped a penny for choice between Bermuda, Florida and California and the last named won.

"After a year spent in rest and sight-seeing we were about to return but decided to wait a little. It is fatal to hesitate over leaving this place as there is usually but one decision and we made it—that is, to stay.

"Through the serious illness of the City Manager I was offered the opportunity of taking up some of the City's work and so, on twenty-four hours' notice, got into the saddle.

"I have completed, put into operation and extended by fifty per cent a Sewage Disposal Plant running this and two other cities; rebuilt the Garbage and Rubbish Incinerator, and at present am in charge of design and construction of a City Hall, a Public Library and a Public Auditorium, as well as a Branch Library and a building to house the Police, Health and Public Welfare Departments. I am also in general charge of vehicle traffic and the City's Safety Committee. It is all very interesting and the city officials are a high grade lot of men without any of the politician in them.

"We are all in the best of health and delighted with the beautiful surroundings and delightful climate of this section of the world. I hope that any Tech '91 men will look me up when here."

The Secretary has only recently heard of the death of Dr. Sarah A. Bond who was connected with our Class. Dr. Bond formerly lived in Boston. She did war service work and died of pneumonia some time during the war.

Barney Capen was in the hospital for several weeks, his old trouble having incapacitated him from work for the time being, at least. He is now at his home in South Boston, where he would be glad to see any of his classmates. Some of the members of the Class sent him a New Year's gift, which Barney says "was a complete and perfect surprise . . . following all the loving '91 messages expressed in so many ways during the recent weeks . . . I cannot begin to express my thanks and appreciation."

Howard reports another grandchild. This makes six—four grandsons and two granddaughters. Can anyone beat his record?

Will Bassett has done his part in bringing fame and glory to the Class, as is shown by the following article which appeared in *Mining and Metallurgy*.

"For constructive research in copper and brass and other non-ferrous metals and their alloys, and his contributions to the establishment of the present accepted high standards of quality," William H. Bassett, technical superintendent and metallurgist of the American Brass Company, has been awarded the James Douglas Gold Medal for 1925.

"Mr. Bassett was born in New Bedford, Mass., on March 7, 1868, and was graduated in chemistry at the Massachusetts Institute of Technology in 1891. In the same year he went to Pope's Island Manufacturing Company, at New Bedford, as chemist, where he remained until 1895, where he became a teacher in chemistry at the Swain Free School, which position he retained until 1900. He then became chemist for the New Jersey Zinc Company, at Newark, N. J., and in 1902 went to the Coe Brass branch at Torrington, Conn., as chemist. In 1903, he became chief chemist and metallurgist and since 1912 has been technical superintendent and metallurgist of the American Brass Company, with headquarters at Waterbury, Conn.

"He is a member of the following societies:—Fellow of American Association for the Advancement of Science; American Institute of Mining and Metallurgical Engineers, Society of Automotive Engineers, American Society for Testing Materials, American Institute of Chemical Engineers, American Chemical Society, Institute of Metals (British), Society of Chemical Industry (British).

"Mr. Bassett was the pioneer metallurgist of the brass industry, and, as such, probably has done more to place the industry on its present scientific basis than any living man. He is largely responsible for the present high quality of refined copper, and he did much work in bringing about the high quality of zinc supplied for making brass and other alloys. He was the first to apply the spectroscope to routine work in the non-ferrous metal industry and first to apply the microscope to the metallography of non-ferrous metals. He commenced work on this subject in 1902 and developed methods for the microscopic examination of copper and copper alloys, and the relations between the crystal size, heat treatment and physical properties, and the application of metallography to manufacturing control.

"Original work has been done by Mr. Bassett along the following lines: Standardization of methods of chemical analysis of copper and its alloys.—Improvement of condenser tubes and methods of manufacture of same.—'Season' cracking of brass, and the development of methods of control in the manufacture of brass tubes, rods, and shapes so that this trouble does not occur.—Elimination of wastes in the manufacture of brass, both in process of manufacture, and recovery of waste materials.—The application of laboratory control to manufacturing methods.—Preparation of standard specifications for non-ferrous metals, their alloys, and products from same.

"Mr. Bassett has been the author of many technical papers and his ideas and general policies have been extensively reflected through

STANDARD PLATE GLASS COMPANY

PAINTS FOR ALL SURFACES

GLASS FOR ALL PURPOSES

BOSTON

HARTFORD

CAMBRIDGE

1891 Continued

the many engineering and scientific committees of which he is or has been a member. At the present time he is a member of several boards and committees, acting in an advisory capacity to several of the government departments. In 1917 he was appointed, by the International Aircraft Standards Board, to represent this country in a conference in London, but owing to the situation in this country at that time, the American Brass Company did not feel that his services could be spared.

"Although his greatest work has been accomplished in copper and brass, in regard to which he is an international authority, he has done hardly less notable work in other non-ferrous metals and alloys."

Henry A. Fiske, *Secretary*,

Grinnell Company, 260 West Exchange Street, Providence, R. I.

'93

This is a dull season for Class news. If notes for this issue could be sent in as late as March 6, we would be able to give you a full account of an innovation in our Class meetings—the holding of the winter dinner meeting in New York City. It is to be held at The Fraternity Clubs, 22 East 38th St., New York City. The guests will be Mrs. Herbert R. (Edna Wadsworth) Moody, '93, who will give a talk on the subject of her interesting book, "We are Here—Why?" and Dr. Dewey. Jim Emery is responsible for the affair, with Latey and Whiston as assistants on dinner arrangements and Blood looking after the program.

A full but much belated account will be given in the July Review—unless the Editors wish to issue a special number of The Review to cover the event.

It is probable that at this dinner, preliminary plans will be made for Class participation in the All-Technology Reunion on June 11 and 12. Every member of the Class who is within possible attending distance of Cambridge should now set aside those two days—June 11 and 12—to take in the gala events, arrangements for which are already well under way. Those who come will never forget it—those who do not come who could, will never forgive themselves. Don't be in the latter class. Mark those dates off now—and read all the notices Ike and Dennie send you.

In replying to our request in the February Review for information regarding Varney, Emery sent us the following clipping from a Portland paper, less than a year old: "Frederick L. Varney, formerly of Portland, now a resident of Chicago, Ill., has been elected as a delegate to the American Institute of Banking Convention, which will be held at Baltimore, Md., July 14.

"Mr. Varney was for some time connected with the Fidelity Trust Company, leaving here several years ago for the West and has been located with the Northern Trust Company in Chicago. He publishes a paper on banking for the institution with which he is connected and is widely known in American banking circles. Mr. Varney married Miss Ethel Barnes of Portland, and every summer they come to Portland for their vacation."

The son of Eugenio T. Iglesias has notified the Alumni Office that his father died July 29, 1923, in San Juan, Porto Rico.

Two out-of-town members of the Class have called upon the Secretary recently—Grosvenor Blood of New York and Harry Latham of Worcester.

Roy Beattie has moved to 209 Bedford St., Fall River. The *Transcript* states that he and Mrs. Beattie sailed from New York on February 7, for the Mediterranean on the *S.S. Conte Rosso* and that Parker Brewer sailed on the same ship.

Frederic H. Fay, *Secretary*,

200 Devonshire St., Boston, Mass.

George B. Glidden, *Assistant Secretary*,
P. O. Box 1604, Boston, Mass.

'95

June 13 and 14 are the dates not to be forgotten for '95's Thirtieth Annual Reunion, following the All-Technology Reunion, June 11 and 12. Preparations are being made, rooms are being engaged, and the Secretary would like to know the names of all members of the Class who are making plans to be present.

Bristol was the place where the Secretary saw the eclipse, although he did not see Haffenreffer, who has been elected President of the Fall River Technology Club. A fine old Colonial house was said to belong to him, and we have previously reported the change in organization of the yacht builders, the Herreshoffs.

The Lake Lowering Controversy has brought '95 into the limelight as well as other classes of M. I. T. "The Engineering Board of Review of the Sanitary District of Chicago on the Lake Lowering Controversy and a Program of Remedial Measures" is the somewhat overpowering title of a Board that includes the following Technology men: John R. Freeman, '76, F. H. Newell, '85, G. W. Fuller, '90, Morris Knowles, '91, J. H. Gregory, '95 and W. W. DeBerard, '01,—twenty-eight engineers in all, civil, sanitary and hydraulic. Cornell, Iowa State College, Johns Hopkins, as well as the Institute were represented. There were also representatives of the former International Boundary Commission, the President of the American Society of

Will Your Children and Theirs go to College?

DO YOU KNOW

—that Brown goes back to his twentieth reunion this spring, and that he has just taken out educational insurance?

To this day he doesn't know which parent or aunt or uncle paid most of his school and college bills. But he does know that he can never repay those obligations created, except by insuring ample money for the education of his own two children.

So he has recently arranged endowment policies for both, to mature at

the beginning of each school and college year. He believes that his children will more genuinely appreciate their education by paying for it out of their own funds.

And Brown also believes that they will better capitalize their own increased capabilities, on or before graduation, by taking out insurance for the education of the next hoped-for generation, as well as to create an immediate estate and financial guarantee of family unity.

The John Hancock is particularly interested in insuring college men and women and in obtaining college graduates for the personnel of the field staff.

Over Sixty Years in Business Now Insuring Over Two Billion Dollars on 3,500,000 Lives.

John Hancock
MUTUAL
LIFE INSURANCE COMPANY
OF BOSTON, MASSACHUSETTS

1895 Continued

Civil Engineers, Chairman of the Maryland Public Utilities Commission, builders of Panama Canal, the largest pumping station in the world, and it is to be hoped, one or two men of every-day ability and common sense to keep the balance. Does it not seem as if two hundred million dollars might be spent to utilize waste instead of carrying it to a point where nobody wants it? The water at the level of Lake Michigan has been falling and the interest in the subject along the St. Lawrence as far as Niagara has been rising. Congress is now sitting up and taking notice. Prof. Sedgwick used to say dramatically as he drank a glass of reasonably clear looking water, that it was perfectly safe to drink from your own sewer if the sewer were only large enough. That's what Chicago had been doing up to twenty-five years ago when she proceeded to make the Chicago River flow up hill and contribute sewage to New Orleans instead of to the Dominions of his Britannic Majesty. The report to the trustees of the Sanitary District, 910 South Michigan Ave., Chicago, is as intricate as might be expected from a board of such eminence and ability, and too full of valuable detail to be summarized here. We are proud of having '95 men on it.

Colonel and Mrs. Azel Ames of Yonkers, N. Y., announce the engagement of their daughter, Miss Eleanor Morrill Ames to Mr. Robert Irwin Powell, son of Mrs. Irwin A. Powell of 10 East 96th St., New York City. The wedding will take place during the latter part of April.

Frank A. Bourne, *Secretary*,
177 State Street, Boston, Mass.

'96 The year 1925 is the year of the big All-Technology Reunion. The year 1926 is the year of the thirtieth anniversary for the Class and will be properly celebrated by a gathering at Wianno similar to our gathering in 1921 for our twenty-fifth anniversary. It will be recalled that when the last All-Technology Reunion was held in 1920 the argument was put forward that it would be difficult to get members of the Class to attend an All-Technology Reunion in 1920 and a Class Reunion in 1921, and, accordingly, we undertook to hold a reunion of the Class at Terrace Gables in 1920 and to call it our twenty-fifth anniversary. A fair-sized crowd turned up and a good time was had but the idea of celebrating our twenty-fifth anniversary a year ahead did not appeal to the men and consequently in 1920 it was voted unanimously to have our regular twenty-fifth anniversary properly observed in the year in which it occurred, with the result that when 1921 came around we had our biggest and most enthusiastic gathering with over seventy men present at Wianno. This year we have learned our lesson and we are not going to repeat the folly of five years ago. However, for any classmates who desire to form a little party at Wianno over June 13 and 14, arrangements will be made and due notice will be sent out. It should be noted that the All-Technology Reunion is tentatively set this year for Thursday and Friday, June 11 and 12. The first notice has been sent to all members of the Alumni Association. This will be followed by later notices and undoubtedly the Secretaries of '96 will put something in the mail as well.

Charlie Lawrence is back on the job again and reports that he escaped a major operation only because he was in the hands of an extremely cautious surgeon who would not operate until he was absolutely sure that it was necessary. He reports that his son, Charles K., now an assistant in a research laboratory at Technology, working for his Doctor's degree, was married on New Year's Day, 1925, to Miss Ruth Pervis, of Brooklyn, N. Y. The bride and groom are now residing at The Hampden, Plympton St., Cambridge.

Lonngren is keeping the Secretary posted with the progress of his steel plant which carries the name of Calorworn Steel Products Company, Santa Ana, Calif. The last word from him was that he planned an eastern trip in March to complete financial arrangements. He

has now changed his abode so that the headquarters of the Lonngren family are Dos Palmas Apartments, 201 Bonnie Brae, Los Angeles, Calif.

Classmates may have noted in the public press that the government suit against Benedict Crowell and associates for misdirection of government funds during the war has been dropped. One of the men originally included in this prosecution was Mort Tuttle and that in itself was sufficient for '96 men to know that this prosecution was unwarranted, because Mort has always stood for high integrity.

Three successive raises in price of gasoline in Massachusetts in the same number of weeks has aroused Hultman as Commissioner on the Necessaries of Life, and an investigation has been ordered. Hultman's latest publication has been a state bulletin on the Coal Fields of Southeastern New England, containing the reports of eminent geologists on the possibilities of securing coal for New England from this district cheaper than it is obtainable from Pennsylvania. The final conclusion which the secretary made after reading the report was that the outlook for a satisfactory and cheap coal from New England was not very promising. The exact title of the bulletin is House No. 1025 of January, 1925.

A postal card from Kissimmee, Florida, dated February 18, looked rather suggestive but further examination showed that it was a report from M. L. Fuller to the effect that he and Mrs. Fuller motored to Florida in December and went on a yachting trip in the Ten Thousand Islands of the Gulf Coast, after which they have been enjoying the Lake Region.

Bert Thompson does not make much noise these days but keeps busy in his office in the Old South Building, Boston. Bert is tied up with the Parks-Cramer Company of Pittsburgh and handles humidifiers, air conditioning systems and piping for heating, sprinkler and power use. One thing which Bert has done has been to develop the Merrill Process Company for industrial heating, using oil as the circulating medium. He reports that a number of successful installations of this system have been made and have proved to be the most satisfactory system and in fact the only satisfactory system for certain lines of chemical work.

The Secretary recently saw Woodwell in New York City and found him just as busy as ever, so that the Secretary did not feel that he was warranted in staying longer than fifteen minutes. During this interval, information was gained that Woodie had been very busy cleaning up his western contracts and had been away from New York more or less during the past few months. He reported that on one of his trips he ran across Eddie Northup, who is in the State Architect's Office at Albany. The meeting was accidental but as both of them had time to spend they made use of it most happily.

The Secretary has received from Partridge a copy of the Church Militant for October, 1924, which gives a page article on Partridge's new parish, St. Ann's Church on East Cottage Street, Dorchester, which Partridge is calling the Little Church Around the Corner. It gives a brief story of Partridge's life and achievements and also tells of his hopes and plans for St. Ann's Church, dealing especially with the reconstruction fund.

Jack Pechin has come to life after a long silence and reports that he is busy at Buchanan, Va., where he says it is fine and warm at the present time and broadcasts the message that '96 men ought to come down there and enjoy it. In view of the fine weather that Boston and New England have been receiving during the month of February this year, there is not the incentive to go South that there has been during some months of February in years past. Pechin reports that Malcolm McGann is with the Emergency Fleet Corporation in Florida.

Charles E. Locke, *Secretary*,
Room 8-109, M. I. T., Cambridge, Mass.
J. Arnold Rockwell, *Assistant Secretary*,
24 Garden Street, Cambridge, Mass.

Russell & Fairfield

INSURANCE



NINETY NINE - MILK STREET - BOSTON

'97 Walter M. Bush, II, has become associated with Ernest J. Flather in connection with general mechanical and industrial engineering work. They will specialize in the supervision of the purchase and installation of equipment, and in the production of drawings and designs for mechanical operations. They will also conduct investigations and submit reports and appraisals. They are located at 40 Court St., Boston, Mass.

Mr. and Mrs. Irenée du Pont of Wilmington, Del., announce the engagement of their daughter, Irene Sophia, to Ernest May of Boston, the marriage to take place some time in the spring. Du Pont is President of the E. I. du Pont de Nemours Company, and a member of the Board of Directors of the General Motors Company.

John Oliver Collins, son of John A. Collins, Jr., X., is a Sophomore at the Institute in Course X. He is Sophomore Manager of the Freshman Track Team, and a member of Kappa Sigma Fraternity.

Dr. Hugh K. Moore, V, Director of Research at the Brown Company, Berlin, New Hampshire, was awarded the Perkin Medal at the January Meeting of the New York Section of the Society of Chemical Industry. This medal is awarded annually for the most valuable achievement of the year in Applied Chemistry. It is given to Dr. Moore for his chemical engineering work in the field of salt, sulphur, and cellulose, in their special relationship to the wood-pulp industry. Dr. Moore has taken out more than thirty patents covering bleaching and pulp making. He has also done valuable work in the hydrogenation of oils.

It is none too early for every Ninety-Seven man to begin to make his plans for attending the All-Technology Reunion on June 11 and 12. Thursday the eleventh will be spent as a Day at the Institute and as a Night at the Jamboree Dinner; Friday the twelfth will be the Gala Outing with Tech Night at the Pops. In addition there will be the individual Class affairs, the plans for which will be announced.

John A. Collins, Jr., '97, *Secretary*,
20 Quincy Street, Lawrence, Mass.
Charles W. Bradlee, *Acting Secretary*,
53 State St., Boston, Mass.

'99 Roland Stebbins writes: "Last fall I came to Stoneleigh Farms, Carmel, N. Y., to take charge of construction work but a few minutes after my appearance, my particular style of beauty so appealed to the owner, that the job of manager was wished on me, meaning seventeen hours

per day, and long hours, Sundays and so-called holidays. A year ago this last fall I rented my house in Williamstown and beat it to France and Italy for the winter. In the spring, I sold the farm in Williamstown, returned, settled up and then went back for a bottle of red wine that I did not have time to absorb in France. I decided not to remain in France but I am hoping now that a scheme will pan out so that I can go over to live there. Here, I have new barns and equipment to tie up seventy cows, shipping certified milk to hotels and clubs in New York, also sending eggs, poultry, dressed hogs, vegetables and cut flowers. And of course I find that the strenuous course at Tech in Military Science has proved a great help; otherwise, I am fairly normal."

Clarence Cluff writes that he is now living in Cincinnati, Ohio, and is connected with the Proctor and Gamble Company at Ivorydale. His son, Dan, is a freshman at the University of Michigan and likes it very much. He is taking Chemical Engineering.

Arthur Foote writes: "It is now twenty years since I started working for the North Star Mines Company at Grass Valley, Calif., and I have been General Manager for about twelve. Same old routine, except that the mine is getting deeper and costs have gone up since the war. It takes about three hundred and eighty men and 1500 H. P. to keep it running. I have been East only once since 1900, and that was before Tech moved to Cambridge."

Florian Lacaff writes that he is still with the Holland Furnace Company of Holland, Mich., in the capacity of Construction Manager. This company is described as the world's largest installers of furnaces for household purposes and will shortly start erection of a third factory at some point in the East, not fully determined upon as yet.

W. E. Parker left on February 19 for the Philippines, where he will oversee work for the U. S. Coast and Geodetic Survey. He expects to return for the All-Technology Reunion in June.

Corse has associated himself with two other Tech men, Newell, '85 and McDaniel, '01, in a company called The Research Service, Inc., with offices in the Investment Building, Washington, D. C. This company is doing consulting engineering work in civil engineering and metallurgy as well as acting as a liaison for establishing contacts with Government departments.

Benjamin S. Hinckley of 177 Park St., Newton, Mass., prominent in the Eliot Church, Newton Y. M. C. A., and Newton Hospital work, was selected a member of the Board of Aldermen by the unanimous vote of the board to fill the vacancy caused by the resignation of

Financing Your Foreign Trade



Main Office, Court Street

OUR Foreign Department offers every modern banking facility for financing international trade.

It is always glad to furnish information on trade conditions, and the credit of foreign names, and to quote, upon request, rates of exchange on all countries.

Old Colony Trust Company

Boston, Massachusetts

1899 Continued

President Arthur W. Hollis on January 1, who was elected to the State Legislature in November. Mr. Hinckley has been a resident of Newton for sixteen years. He is in the coal business and from the time he moved to Newton has been active in all its affairs. His term as Alderman-at-Large from Ward 7 expires January 1, 1926.

J. B. Ferguson writes: "My belated reply to yours of October 28 does not mean that I was not very glad indeed to hear from you, for yours was the first news I had received from the Class for many months. The report of the Reunion in *The Review* was somewhat disappointing to me for I could not make out just who had attended. I greatly regret that it was impossible for me to have gone, especially as it was such a short run up there, and having been to Marthas Vineyard a couple of summers ago, the charm of the place was well-known to us.

"Early in the summer Whitney dropped in to see me, as he was in town on business. This was the first time we had met since graduation and I was very sorry that I did not have more time to talk over old times with him.

"A year ago last summer I found J. A. Stetson in one of our hotels. He was only passing through and so had only time to say howdy. Two years ago Carroll Brown motored through here on his way to Washington, but as his family was just recovering from the chicken pox and as Brownie had lost his voice through a cold, we couldn't exchange much but looks.

"You ask about my accident. I hate to tell you for it sounds too much like a case of flagrant violation of a recent Constitutional Amendment. I was stepping down from a concrete runway on to a concrete wall of one of the clarification basins of our new sewage disposal plant, when I caught my toe on a piece of form-work and fell, or rather was thrown, about fourteen feet on to jagged rock, landing on my left hip, but partly breaking the fall with my left hand. The net result was two months in the hospital and another at home, with a badly broken pelvic bone and crushed left wrist. Several complications were feared and some even started but were headed off in time and predictions that I would be a permanent cripple were sufficiently answered, I should say, by my skating during the holidays on Mystic Lake at Winchester. My unusually rapid recovery is attributed to various causes some of which, as is usual I guess, were very amusing."

W. Malcolm Corse, *Secretary*,
1901 Wyoming Avenue, Washington, D. C.
A. H. Brown, *Assistant Secretary*,
53 State Street, Boston, Mass.



Robert A. Boit & Company

Insurance
OF ALL KINDS

40 Kilby Street

Boston, Mass.



'00

As these notes are being written, there has come through the mail Denison's first issue of *The Boomerang* with its preliminary announcements of the big All-Technology Reunion on June 11 and 12. It is a work of art and gives one some idea of the preparations which are being made to make this the biggest and best since the celebrated reunion of 1916. Coming, as it does, immediately after our Twenty-fifth Reunion on the Cape, June 8, 9 and 10, every son of old 1900 should plan to devote the entire week to being in on the fun. Denison describes a boomerang as "a dingus that comes back when thrown out properly," and if you don't come back we shall assume that you were not thrown out properly. You should have been kicked out. It is the writer's temptation to dilate upon the plans for our house party on picturesque old Cape Cod, but he is informed that the special committee in charge is soon to deluge you with descriptive matter and it would not be fair to steal their thunder. Sufficient be it to say that the week of June 8 will be a never-to-be-forgotten chapter in the life of every man who comes back and brings with him the youthful spirit that animated him in the days when examinations were the only things in life requiring an anxious thought.

If there be any one thing that seems to afflict the men of our Class to the great detriment of this column, it is an overwhelming sense of modesty. A heartening note has come from Henry Jouett containing an appreciation of the news appearing in *The Review* but carefully refraining from statements as to his doings. All of us remember the football player of our freshman years and those who have kept in touch with him have realized that he is still bucking the line hard and scoring repeatedly. In the *Cleveland News* for February 14, the writer came across a most interesting item describing the plans for the new Union Station to be constructed in that city by the Van Sweringen interests. The magnitude of the proposed undertaking is in itself startling but its effect was nothing compared with that produced when the writer read that H. D. Jouett, chief engineer of the Terminal Company, was in charge of the construction. Some job, some engineer, and some honor for 1900! We are pleased, proud and offer Jouett hearty congratulations. The station is to be a monumental affair of fifty stories, towering seven hundred and eight feet above the station concourse and ranking second among the world's highest buildings. Its architects were the designers of the Washington Union Station and also the station in Chicago. Some idea of the magnitude of the undertaking may be gleaned from the fact that Jouett will have supervision over the placing of 400,000 yards of concrete, 65,000 tons of steel, 42 miles of track and 450,000 square feet of platform. The aggregate length of the street and railroad bridge work involved is approximately 10,000 lineal feet. If any of you fellows find yourself near Cleveland you will profit immensely by dropping in on Jouett and asking for a personally conducted inspection.

Bugbee was recently in New York attending the annual meeting of the American Institute of Mining Engineers and reports having seen Stanley Sears. Sears is now connected with the Income Tax Division of the Treasury Department, at Washington, as expert on mine valuations. This is good news for it means that he is near enough Boston to be present at the Reunion and ought to have money enough to finance the whole proposition.

Bob Leach is just recovering from an operation and is at Bridgeport, Conn., where he has for some years been connected with Handy and Harmon, a silver firm. We are sorry to learn, Bob, of your hard luck but glad to know that you are out of the woods and on the road to recovery. Best of luck from now on.

Collier visited the 'Stute recently and much to the Secretary's disappointment missed connections with the latter. He dropped in on Bugbee and from a first-hand report it was learned that he looked disgustingly healthy and prosperous. He put his name right down on the dotted line saying he would be with us on the Cape in June and would help contribute to the spirits of the occasion. Wonder what he meant!

George E. Russell, *Secretary*,
Room 1-272, M. I. T., Cambridge, Mass.

Coburn, Kittredge & Co.

Investments

68 Devonshire St.

Boston, Mass.

'01

From the Waterbury, Conn., *Republican*, under the date of January 25, comes what purports to be a picture of three Technology men securing certain data on the eclipse. Imagine my delight when I find in the caption that E. H. Davis ("with watch") is in the picture. With that fine feeling for the niceties which was one of Neddy's most salient characteristics, he presents the picture as a total eclipse although the "with watch" is somewhat helpful. It makes me think of that subtle little tale which some of you may know which ends "father's got a hat on." For the benefit of those who do not know the story I will say that it is omitted in the interest of economy of space and not at the request of the Editor.

Fred Clapp, still one lap ahead of the authorities and with a jaunty insouciance which reminds one of the early bush ranging days of his present approximate abode, communicates as follows: "Clapp has completed his explorations in Australia after traveling 6,000 miles by automobile and tractor in a difficult part of the Northwest, ending with a 3,000 mile trip from Broome to Perth with many side trips. To show the unsettled nature of the country, it may be said that along the main road from Broome to Mullawa (the rail head), a distance of approximately 1,225 miles, there are only 33 houses, outside of the three small villages of Port Hedland, Roeburne and Onslow. From Australia he has returned to New Zealand, where he is Consulting Geologist in some oil developments. The beautiful scenery, moderate climate and hospitable inhabitants are a pleasant change after the 'spinifex and sand' of Northwest Australia."

I hope you fellows get that line about hospitable inhabitants. I don't know what "spinifex" is—I have had neither Fred's opportunities nor necessities for extensive travel—but if it is any worse than the stuff that some of my friends are producing locally, it must be pretty dire. By the way, I am advised that the statute of limitations applies so that Fred will be able to assist at the forthcoming All-Technology Reunion. He has signified his intention of so doing, if possible. It may be well to mention that the Class of 1901 is holding a reunion of its own at that time and that already a large number have signed up for the party. Another thing about Fred Clapp before I leave him. His secretary has just written me that Fred has cabled from Gisborne, New Zealand, to instruct the forwarding of his Class dues. She adds with a benevolence that could well be copied that she is solicitous concerning last year's payment, presumably with an eye to action. This is an attitude that I cannot commend too highly and in it there is a moral—possibly for you, boy-friend.

My mind is working circuitously so I swing back to Neddy Davis and transcribe with suitable deletions the following: "Now, my dear doctor, how the devil am I to write you any interesting news about anybody or anything? . . . I am not a globe trotter—worse luck—nor a shining light of any other sort . . . I am just a damned middle-aged old guy who earns half his salary, pays half his bills, works his garden and smokes good Dill tobacco . . . One can't make a story out of that . . . I'd awfully well like to oblige, but I simply can't . . . I'd get married, just to shake a wedding bell for you, but my wife has scruples against it . . . I'd die and go up on a burst of glory, to help out your recordology, but the insurance people are unreasonable about it . . . I'd go and be born again and thus give you a lift on the nativities, only the Salvation Army has thrown me down—so the only thundering thing I can do is to say, with all my heart, and in the words of the . . . *A. W. R.*, 'Enclosed please find \$2.00 for 1924 Class dues.'"

There is a (Vesta) Victorian lilt to Neddy's lyric prose that keeps alive the best traditions of Course IX in its palmy days and I trust there are those who will apprehend my delicate suggestion and while applauding the adjective act upon the noun.

Mansfield Estabrook writes from 963 Lexington Ave., New York City, and is apparently one of the 60% of the Class, upon whom Harry Lohbiller has recently called. Glad as I am to have Harry's whereabouts confirmed, I could wish that Mansfield had dropped a few words about his own present activities. The only inference which I can draw is that he is planning to participate in the Reunion and plans to give us the burning words of his Saga vocally rather than dessicate them into the monotone of the written page. Harking back through the mist of years, I envisage him as one of the stalwarts of the Glee Club supported ever by the sweet boyish tenor of Walter Poore Davis, once of Newburyport. George Allen is another of the same group and Matt Brush lent vocal support to the efforts of his comrades. Several quartettes—for Howard Chandler's benefit let me say that this refers to a vocal group and not to a diminutive violation of the Volstead Act—are being arranged for the Reunion.

By the time this message is in print, Freddy Freeman of Portland, Me., will be a titular Member-at-Large of the Alumni Council. Into what devious paths of thought the English language can lead us! Boston Police please notice. There is a sequence there, although the allusion may not be altogether clear, which reminds me of an obituary notice which I once saw in a Dublin newspaper, the *Freeman's Journal*, to be exact. It ended with the glowing peroration, "Saints pray for

ESTABROOK & CO.

SOUND INVESTMENT SECURITIES

15 State Street
Boston

24 Broad Street
New York

HARTFORD

SPRINGFIELD

PROVIDENCE

NEW BEDFORD

1901 Continued

him; Mother Mary intercede for him; American papers, please copy."

Denny Haley is now located in Joplin, Mo. He is Vice-President and General Manager of the Chanute Spelter Company operating several mines and carrying on a large development program in the Joplin district. Denny writes that the mental strain of carrying a couple of daughters through Bryn Mawr and attempting to correct a bad slice on his drive has forced other and more important matters into the background. Denny is planning to assist at the Class Reunion in June, leaving the daughters temporarily in abeyance and concentrating upon his other difficulty. He inquires for Frank Baxter. The last address that I have for the agile Francis is 1817 K St., N. W., Washington, D. C. If anyone knows a later address, will they send it to me and also to Denny in 314 Frisco Building, as above.

I am a little timorous of asking members of the Class for addresses. My last benevolent effort in this direction drew from Leon Thurlow the caustic comment that he had never heard of anyone in the list that I offered, not even young Ross Redsucker. As I remember Leon's somewhat hectic career in Technology, I should have supposed that not only was there no one in the Class whom he did not know intimately but that his acquaintance was well-nigh complete with that large number of instructors to whom was intrusted the conduct of the so-called extra curriculum studies. Leon, by the way, was one of the most active members of the Twentieth Reunion group and promises to be the soul of the party when we foregather next June. At the present time Leon lives at 199 Sackett St., Brooklyn, N. Y., but can be reached by telephone, telegram or letter at the Class Reunion, June 8, 9 and 10. He will then pass on to the several festivities planned for the eleventh and twelfth, which will include a reception and tea at which Dr. Stratton will act as host and I provide the music, followed by the so-called Jambouree Dinner for which I decline to be responsible, and a happy day in the country, probably on Ward's Island where all the good dead horses go, ending with a Technology night at the Pops at which time we initiate the Class of '25 if they have any money left. The General Committee further suggests that week-end parties will consume the balance of the week. There is a trifling error in the typography of the notice which I received. Freddy Boyd will explain the situation at request.

A large bunch of new addresses have just reached me from the Alumni Office, but as a new register of former students is shortly to

appear, I refrain from absorbing the valuable space of this distinguished journal by spreading abroad the sordid details.

Allan Winter Rowe, *Secretary*,
295 Commonwealth Ave., Boston, Mass.
V. F. Holmes, *Assistant Secretary*,
131 State Street, Boston, Mass.

'02

Charlie McCarthy—no,—we mean Major Charles E. McCarthy, has been transferred from the Canal Zone, and his latest address is National Guard Armory, Sacramento, Calif.—John R. Morse is in Clarksburg, West Virginia, where his address is 115 Lang Ave.—Arthur Nash is with the Alcorn Combustion Company, Bellevue Court Building, Philadelphia.—Walton Sears hung out his shingle as a Consulting Engineer a year ago January 1, with offices at 200 Devonshire Street, Boston, which he shares with Fay, Spofford & Thorndike, with whom he was formerly associated.—Herbert S. Walker is with the Philippine Sugar Central Agency, Bacalod, Negras Occ., Philippine Islands.—Captain Philip H. Worcester has been transferred from West Point to Washington, where his address is 2310 Connecticut Ave.

Frederick H. Hunter, *Secretary*,
Box 11, West Roxbury, Mass.
Burton G. Philbrick, *Assistant Secretary*,
276 Stuart Street, Boston, Mass.

'03

Friday evening, February 13 (lucky day), the Secretary got together as many local '03 men as could be cornered at one time and we had dinner at the Copley Square Hotel. "Among those present" were George Greene, Aldrich, Gleason, C. F. Green, Haddock, Jackson, Scholtes and Nutter, and we dined on broiled live lobster and all the "fixins." Scholtes had such a cold on his chest that he wheezed like a rusty locomotive, but he came. We are having these dinners every other month on the second Friday and the Secretary is sending out notices to all members in Boston and vicinity who seem to be at all interested. Word came from Whitcomb at New Haven that he is frequently in Boston and would like to attend if possible, but although the Secretary wired him, it was too late to make connections this time. There are undoubtedly other members who pass through Boston occasionally and who might be able to arrange their schedule to be here on the second Friday of even numbered months, and whenever this is the case we should be more than glad to welcome them. Myron Clark expected to be with us but wired at the last minute he couldn't come.

We learn with sincere regret that Jack Howard's mother passed away a short time ago.

Following is a clipping from Birmingham, Ala., about W. E. Mitchell, with our congratulations. If he had supplied the item himself we should be glad to thank him for it from the housetops because news is not exactly plentiful, but as he probably shares the natural modesty of the Class we will try to overlook his concealment of his garlands.

"W. E. Mitchell and O. G. Thurlow have been elected Vice-Presidents of the Alabama Power Company, according to announcement Saturday by Thomas W. Martin, President. The election was effective December 29.

"Election of Mr. Mitchell and Mr. Thurlow to the higher titles will be pleasing to their friends in Birmingham, where they both have resided for the past twelve years. Mr. Mitchell is a brother of the late James Mitchell, President of the Alabama Power Company in the beginning, and the man after whom has been named Mitchell Dam.

"The new Vice-President has been operating head of the company for some time and has administered the departments to the general satisfaction of the patrons of the company, it is stated. He is one of the most active men in Birmingham on community affairs, having been chairman of the Montevallo drive and engaged in many other enterprises of that kind for the advancement of this section. He is a member of the Independent Presbyterian church and president of the Men's Club of that church."

As this is the last appearance of Class notes before June, attention is called to the All-Technology Reunion, June 11 and 12. The Class will undoubtedly have a get-together meeting at the Pops, Friday, June 12, and we all expect a good sized turn-out.

We have recently received notice of the death of Lewis Wehner, 696 Shepard Avenue, Milwaukee, Wis., who passed away September 7, 1924, after an illness of three months due to heplococci infection.

Chester S. Aldrich, *Secretary*,
6 Commercial Wharf, Boston, Mass.
Gilbert H. Gleason, *Assistant Secretary*,
25 Huntington Ave., Boston, Mass.

'05

According to the Editor of The Review, in his current call for Class news, the hounds of spring are on winter's traces but it takes more imagination than was bestowed on some of us to compose a springtime poem just now, the middle of February. You will have to draw your own picture.

Charles R. Prichard, for the past four years Vice-President and

Travel- Study Groups

Summer vacations spent in travel, either for scientific or general studies, complement university courses to an invaluable degree.

Study groups under the leadership of faculty members will find in the Dollar Steamship Line service unique advantages for such trips.

Palatial President Liners go Round the World with sailings every two weeks. They touch at 21 important world ports, thus providing transportation to the Orient, Egypt, the Mediterranean, Europe and Round the World with special stopover privileges which no other service can duplicate.

The personnel is thoroughly trained. The accommodations provide rare comfort. The cuisine is excellent.

NOTE: Faculty members are offered special inducements to organize travel-study groups. For complete details write

HUGH MACKENZIE, General Passenger Agent
311 California Street, San Francisco, California

HOWARTH LEWIS, Asst. Gen. Passenger Agent
15 Moore Street, New York City

DOLLAR STEAMSHIP LINE

1905 Continued

General Manager of the Lowell Gas Light Company, has been elected Vice-President and Executive Manager of the Lynn Gas & Electric Company. Prichard was for fifteen years Treasurer of the Beverly Gas Company and is at present a director of the Brockton and Salem Gas Companies and the Gloucester Electric Light Company.

It is a pleasure to record that our astute, perennial politician, Andrew Fisher, Jr., has at last been the recipient of high honors. He was elected a director of the Roosevelt Club of Massachusetts, an impressive semi-political organization, a list of whose officers is but a page from Who's Who. Andy, we salute you!

H. P. Hollnagel, who spent the first decade after graduation in collecting degrees, has contributed to the *Iron Age* an article on hardness tests. Professor Cowdrey to the contrary notwithstanding, he claims that the scleroscope and Brinell machines are not interchangeable because neither can displace an atom from its position in the lattice. We are inclined to agree with Cowdrey who has a sure-fire formula which would have appeared in the December Review but for the fact that the Editor needed the space and carved it out. To prove his case, Cowdrey went way up to Rutland, Vt., in mid-winter to address the Engineers' Club.

Henry Stevenson moved up to North Andover, Mass., some months ago. Unable to get a word from him, we thought he was busy with his new job. He evidently was and the kind of job is now explained by an announcement of his marriage to Miss Mildred Jenkins of Andover on February 10.

The following article has appeared in several technical journals: "Arthur J. Manson, manager of the transportation division, railway department, of the New York office of the Westinghouse Electrical & Manufacturing Company, has been appointed to the position of manager of the heavy traction division, railway department, at Pittsburgh, Pa. After graduating from the Massachusetts Institute of Technology in 1905, he entered the company's engineering apprentice course and assisted in the building and testing of the first electric locomotive for the New York, New Haven & Hartford. In the spring of 1907, he was assigned to the electrification work on this road and aided in the inauguration of the electric service. In this position he instructed the steam enginemen in their duties as electric enginemen. Mr. Manson was associated with the preliminary test conducted by the Pennsylvania Railroad on Long Island prior to the decision as to the system to be used in the Pennsylvania tunnels entering New York City. Later he became associated with F. H.

Shepard, director of heavy traction, entering the New York office of the Westinghouse Company. He assisted Mr. Shepard in connection with the Pennsylvania contract for power house, substation and locomotives for the Pennsylvania New York tunnel electrification. In 1910, Mr. Manson entered the sales department of the New York office following construction, subway and elevated work. In 1920 he was made manager of the transportation division of the New York office, which position he held at the time of his recent appointment. During the time when Mr. Manson was manager of the transportation division, he wrote and published a book entitled *Railway Electrification*."

We hear that George Rhodes is now Vice-President of Ford, Bacon and Davis and that Nat Richards holds a similar berth with Purdy and Henderson, both of New York.—Arthur Sweetser is assistant district manager of B. F. Sturtevant Company, Boston.—Bill Tufts has joined Billy Ball and John Loughlin in the Associated Factory Mutual Fire Insurance Company, 184 High St., Boston.—Poor old Course XIII. We thought Bill Blakeman would stick but he has given up shipbuilding to become a life insurance salesman. Think of it! He is district manager, Equitable Life Assurance Society, Equitable Building, Baltimore.—Speaking of XIII, T. M. Gunn is technical editor, Vacuum Oil Company, New York.—Mitchell Mackie is Vice-President of the Federal Steel Sash Company, Waukesha, Wis.

Doc Lewis recently got a half-page interview in a Boston Sunday paper, all about a new poison gas developed at Tech, deadlier than Lewisite (which Doc did not invent) and even exceeding lead tetraethyl. Year by year he is getting more space; now they are feature articles. Also he contributed a paper to the Division of Industrial and Engineering Chemistry on "Principles of Gas Absorption" in the Absorption Symposium. You can't beat Doc, who is working the offense and defense at the same time.

Elmer Wiggins has left the Viscoloid Company but keeps his residence in Leominster, Mass. He is now New England representative of the Nixon Nitration Works of Metuchen (express), Perth Amboy (freight) and New Brunswick (telephone), New Jersey. He writes: "I have started out more or less on my own since last June, and in addition to covering New England territory for Nixon Nitration Works, I have several customers in other parts of the country as far west as Chicago. All my experience in the past has been in the operating line, but when I was able to obtain a little selling



CRUISE with RAYMOND-WHITCOMB

MEDITERRANEAN ROUND THE WORLD

JUNE 30, 1925

Sailing at a time when many of the countries are at their loveliest, to a list of ports that overshadows all other cruises, this is the first fully rounded summer cruise in the brilliant Mediterranean field. Rome, Pisa, Venice, Tangier, Ragusa, Athens, Jerusalem and Cairo are among the 30 cities visited. The Cruise Ship—the magnificent new liner S. S. "Oronsay". All rooms outside. 53 days. \$675 and up.

OCTOBER 10, 1925

Visiting the remote wonders of Australia, New Zealand, Tasmania and New Guinea—for the first time in cruise history—among some 50 ports and cities. Touching at all the continents on a course of 37,000 miles. The ship is the brand-new Cunarder "Carinthia" (20,000 tons) with over 100 single rooms, some 80 rooms connected with private bath—a swimming pool, squash court, gymnasium. 143 days. \$2,000 and up.

"MIDNIGHT SUN" CRUISE June 30—37 Days

The annual New York-Scandinavia Cruise is distinctively a Raymond-Whitcomb trip—a form of travel that is today a real American institution. This, our fifth, sails on the popular Cunarder "Franconia", to visit Iceland, the majestic fjords of Norway, Sweden, Denmark, Holland, France and England. \$725 and up.

Booklets and ship plans from
RAYMOND & WHITCOMB CO.
 22 BEACON STREET, BOSTON

R.F.C.

1905 Continued

experience with Viscoloid, I realized this was the field for me, and consequently, I have started on this new venture, and I am glad to say, under the conditions, it has proved entirely satisfactory to me."

Ike Litchfield sends out an appeal to stress the forthcoming All-Technology Reunion with its day at the Institute and Jamboree Dinner Thursday, June 11 and its Gala Outing and Tech Night at the Pops on Friday, the twelfth. Afraid, maybe, that you will read only the Class notes. Better read all about it and, by all means, remember that on June 12, 13 and 14, the Class of 1905 celebrates with its big Twentieth Reunion.

Roswell Davis, *Secretary*,
12 Atlantic Avenue, Beverly, Mass.
S. T. Strickland, *Assistant Secretary*,
26 Pemberton Square, Boston, Mass.

'07 Reunion events to be kept in mind continually and to attend in June are first, Day at the Institute and Jamboree Dinner, June 11; Gala Outing and Tech Night at the Pops, June 12—second, '07 Get-Together on Saturday and Sunday. Plans are under way for the securing of the use of the new Country Club at Manchester, N. H. Harold Wonson and Laurie Allen are right on the spot and are making arrangements. Wonson writes regarding this: "We have a wonderful clubhouse and one of the best eighteen-hole golf courses in the country. It is only a little over fifty miles from Boston with a wonderful road all the way. A gentle driver makes the distance in two hours, and some of our friends who step on it make the trip consistently in a little over an hour and a half. It takes about an hour and three-quarters by train, with good accommodations each way. More of this in later issues of The Review and by personal notices. Save the dates now.

John G. Barry, 612 Mills Building, El Paso, Tex., is engaged in private practice on geological studies, mine examinations, development programs and management, as a consulting mining geologist.—Addison Miller is the head of Addison Miller, Inc., railroad contractors, St. Paul, Minn.—Vernon Rood, describes himself as "hard rock miner," Utah-Apex Mining Company, Bingham Canyon, Utah.—Robert K. Taylor, at 1211 Chestnut St., Philadelphia, Pa., is employed in the field in connection with the construction of the Broad Street Subway, a project about seven miles long, four track wide, costing about \$75,000,000. The city is planning two more subways which will mean at least ten years' work. Look at this from Bob: "I had decided that the Alumni Association at \$5.00 a year would have to be classed as a non-essential, but as the honor of '07 is at stake, I have decided to continue my membership and so enclose a check for that amount." How is that for Class loyalty! Would that more '07 men felt the same way. A line from Johnnie Thomas states that he is department manager with the American Can Company at 104 South Michigan Ave., Chicago.—Carl J. Trauerman writes: "Mining Engineer for and member of the firm of Lauzier, Wolcott & Company, Brokers, with offices in Butte, Billings, Missoula, Spokane, Walla Walla; Editor of *Montana Natural Resources Bulletin*; correspondent for over a hundred publications; in charge of advertising, statistical, correspondence and local trading departments of our firm; married, no children, present hobby, radio; Secretary-Treasurer of Montana Society of M. I. T."—Philip B. Walker, construction engineer with Whitin Machine Works, Whitinsville, Mass., is installing a new plant to make cloth out of grass, hemp, or jute. His family now consists of three boys and one girl. He writes that Professor Tommy Pope, well known to all '07 Freshmen, is living in Whitinsville and he has had several interesting talks with him. His daughter is town librarian. Professor Pope is still a great chess player.—Lawrence T. Walker gives his occupation as Major, United States Army, Retired, with address in care of the National Shawmut

Bank, Boston, Mass. The envelope in which this information came was postmarked Algiers.—Sidney D. Wells, chemical engineer, with Forest Products Laboratory, Madison, Wis., writes: "I am married and have four children, one boy and three girls. My work is on the technical problems of the pulp and paper industry. I have been doing this since 1911. We have considerable work in the plants as well as in the laboratory, and find it very interesting."—Leslie C. Whittemore is assistant sanitary engineer, The Sanitary District of Chicago, 700-910 South Michigan Ave., Chicago, Ill.

The following article is from the *Great Falls (Montana) Tribune* of February 6, 1925: "Albert E. Wiggin will direct the activities of the Great Falls Commercial Club, during the coming year. He was elected to the presidency of that organization Wednesday at a meeting of the board of directors and will immediately take over the responsibilities of the office, succeeding George P. Durham, who has piloted the club for the last two years.

"Mr. Wiggin is general superintendent of the Great Falls reduction works of the Anaconda Copper Mining Company and has been a resident of Montana for the last eighteen years. With the exception of six years, spent at Anaconda, he has lived in Great Falls since his first arrival in the state.

"Following his graduation from the Massachusetts Institute of Technology in 1907, Mr. Wiggin came to Great Falls and was first employed at the smelter as a sampler. From that work he advanced in the next eleven years to the office of chief executive of the local plant, the position he now holds. In 1912, he had been made assistant to the local general superintendent when he was chosen for the position of superintendent of concentration at the Washoe smelter at Anaconda. Six years later he returned to Great Falls as head of the local reduction works.

"Throughout his residence in the State, Mr. Wiggin has taken an active part in the community development and civic affairs and as President of the Commercial Club, he will have an opportunity to apply the knowledge he has gained of this territory's needs and its current activities. Heretofore he has served as President of the Great Falls Rotary Club and for a long period has been a member and director of the Commercial Club. During the last year he has been one of the Club's Vice-Presidents.

"As President of the Commercial Club, he becomes the directing head of the local organization which more than any other devotes its efforts to industrial and agricultural expansion and development. In addition to his personal and local interest in work of this nature, Mr. Wiggin's position with the Anaconda places him in an atmosphere that coincides with the aims and purposes of the Commercial Club. The Anaconda just now is increasing the scope of its interests in and contact with the general development of the State. It was one of the most effectual factors which cooperated in realizing a maximum community benefit from 'Montana month' last fall.

"The Club has no specific program for the year that will materially enlarge its activities," Mr. Wiggin said Wednesday evening, "but certain it is that we are approaching the spring of the new year with a most optimistic outlook for the season ahead. We hope that the events of the year will make it possible to find greater opportunities for usefulness to the community and to make the Commercial Club an ever greater factor in advancing the best interests of Great Falls and northern Montana.

"General improvements noted during the last season reflect benefits on both agriculture and industry, in which this territory is vitally interested. Continuation of last year's betterments will permit the city and its territory to more nearly realize their ambitions toward a more intensive development."

H. J. C. MacDonald, who is now field superintendent for the New York Oil Company at Casper, Wyo., writes: "It is still very difficult for me to discover value in a barrel of crude oil; but I needs

WE HAVE BEEN HELPING OTHERS KEEP THE B. T. U. WHOLLY FOR THE PAST 30 YEARS.

HUNDREDS OF TECHNOLOGY MEN KNOW AND ENDORSE OUR WORK AS OF THE HIGHEST GRADE. MAY WE HAVE THE PLEASURE OF SERVING YOU TOO?

NIGHTINGALE & CHILDS COMPANY
205 CONGRESS STREET - BOSTON, MASS.

CONTRACTORS FOR ALL KINDS OF HEAT AND COLD INSULATION

1907 Continued

must, for one in a million of these barrels contains a tuppenny-hap-penny that's mine. Frankly, six months ago I didn't know what an oil structure was, although the renown of my present next-door neighbor, Teapot Dome, had reached me. By now, I have cruised over 5,000 auto-miles trying to descry the arched back of one of these beasts above this semi-desert, and can describe their very elbow motions in geological terms, minus igneous injections, but plumb full of oil, water and gas. My job is so satisfactory that I have already met, socially, on equal terms as it were, several gentlemen who 'have made money in oil' and 'swear awful.' And its permanency far outruns my present inclinations, for beyond barrels of crude oil, I can see all the time, sparkling tons of ore. Anyway, to one who has dug so industriously underground, it is annoying to have mineral wealth spout at you out of an oil well's snout.

"The only mineralized excitement I have had this summer has been to drill an oil well 4800 feet deep with the new F. K. Sullivan drill. Although I have drilled more than my share of mineral holes, this is my record for depth. Also, I examined the old Wyoming mining camp, Atlantic City, sleeping these many years, without awaking it. I later lit upon a fly-by-night mine in the Colorado mountains, yet it seemed good to get underground again and find out where real values can originate, if they will, and knock chunks out of the earth's bosom with a geological pick that has been so used to candlelight that it still blinks in the daylight."

Bryant Nichols, *Secretary*,
2 Rowe Street, Auburndale, Mass.
Harold S. Wonson, *Assistant Secretary*,
W. H. McElwain Company, Manchester, N. H.

'09 By this time you have received notice of the All-Technology Reunion in June, and have made your plans to attend. Plan to arrive in Boston not later than Wednesday noon, June 10, so as to take in the only strictly Class of '09 Reunion that afternoon and evening. We are not going away for overnight as in former years, but have decided to go to some nearby place for a get-together and a picnic supper, returning to Boston in the evening, all ready for the big affair on the 11th and 12th.

Plans have not progressed far enough for a definite announcement at this time, but you can count on Heine Spencer's committee

to give you a good time. Everyone will receive a notice later, but make your plans now for one extra day at least. Last year we had an attendance of over fifty—this year we should have twice that number.

Benny Dow dropped in the other day to say that he was not making wrenches any more, and for the present at least could be reached at 4 Kahler Avenue, Mattapan.

A few days ago the Secretary received a copy of the Report to the Federal Power Commission on the Water Powers of Southeastern Alaska by J. C. Dort, who is still with the U. S. Forest Service, Department of Agriculture.

Tom Desmond and wife left New York last month for a trip around the world. They expect to visit Egypt, India, Java, the Philippines, China, Japan, and so on.

C. S. Robinson was in charge of a party of Appalachian Mountain Club members taking a thirty-three mile camping trip on snowshoes and skis through the new Monadnock-Sunapee trail. The party camped out for a day and a half, and the night between, in New Hampshire snows, tramping, cooking, eating and sleeping under the open sky with the thermometer hovering round zero. From all accounts, it is just as easy to have a good time in January as in August, if one knows how to plan for a trip of this sort with the proper kind of equipment.

Noon luncheons have started again in Boston and in New York. If you have recently located in either place, notify the Secretary so that your name may be included in the address list.

Charles R. Main, *Secretary*,
200 Devonshire Street, Boston, Mass.
George A. Haynes, *Assistant Secretary*,
188 Lincoln Street, Boston, Mass.

'10 By the time this appears you will all have received a copy of *The Mitten* with the preliminary announcements of the Reunion. At this writing the plans include a big stag dinner on Wednesday evening, June 10, attendance at the functions of the All-Tech Reunion on the eleventh and twelfth, and an auto ride bright and early Saturday morning the thirteenth to a sea-shore hotel with wives and children for Saturday and Sunday. We have not yet heard from all the hotels written to at this date, so we have not made a final choice, but golfing, tennis, swimming, etc.,



Revolutionizing an industry through leadership

INDUSTRIES are never revolutionized by *followers*. In the low pressure steam heating field it was the leadership of Mr. C. A. Dunham which changed the entire aspect of the problem presented, 20 years ago, for solution.

It is more than two decades since Mr. Dunham first produced the Dunham Thermostatic Radiator Trap. Imitators have arisen by scores, yet the basic principle of the Dunham Trap has never been changed nor have the hosts of followers ever improved upon the original product. It stands today as a supreme challenge, having demonstrated its fitness to lead just as it has proved its superiority to traps (now obsolete) in existence before its introduction in the heating field.

C. A. Dunham Co., Chicago

Boston Branch Sales Office: 136 Federal Street

Telephone: Main 7663

F. D. B. Ingalls, '01, Mgr.

1910 Continued

will be included in the program wherever we go. Jim Cox and Hal Manson will be in charge of the program there, so it's bound to be full of pep.

Response to the appeal for contributions to the treasury has been good and includes checks from California, Oregon, South Dakota, Iowa and points East. Most of the fellows are more generous with their money than with words, but a few cheery greetings have drifted in. Fred Dewey, who is running a bank in the little village of New York approves the activity of the Class. John Ahlers writes that he hopes to come on from New York in June. Carroll Benton writes that he is pleased to send a check (how we love to please) and says "I have just returned from a business trip to Boston and vicinity. I didn't get an opportunity while there to get over to the Institute or to look up any of the fellows. I was much interested in learning that 1910 is planning to observe its fifteenth anniversary with a reunion this coming June. I certainly hope I shall be able to make it."

Charlie Almy is in England on a three months' business trip. It looks as if Dewey and Almy were hitting on high. Albert Huckins writes as follows: "Replying to your letter of recent date requesting that I write you something for the Class notes in the Technology Review, I would say that for the past twelve years I have been associated with E. Naumburg & Company, Bankers, specializing in Commercial Paper at their Boston office. In 1916 I married Miss Clara Webster of West Newton and have lived in Winchester since that date. We have three children, a girl seven years old and two boys, one, two and one-half and the other seven months old. I am looking forward to the Reunion in June and hope to take in not only the Institute activities but any special ones that the Class of 1910 may conduct. I am sure you will have no difficulty in enlisting the enthusiasm of all of our classmates in this vicinity and if I can be of any service, do not hesitate to call upon me."

"The following notices about classmates are gleaned from the press; William H. Wengert will teach mechanical drawing and blue print reading in the Bangor Free Evening school, which opens its next session on Monday night. Mr. Wengert is a mechanical engineer and a graduate of Massachusetts Institute of Technology, and has had a wide experience in teaching in Boston-evening schools. The course under Mr. Wengert will commence Monday evening from 7.30 to 9.30 and the classes will be limited to 15 members."

"Joseph W. Northrop, Jr., son of Joseph W. Northrop, architect, of Bridgeport, has been awarded honorable mention in the competition

for distinctive small houses, published by the *American Architect*. Mr. Northrop is a successful practicing architect in Houston, Tex. He is a graduate of Mapewood School and High School of Bridgeport, Wesleyan University and Massachusetts Institute of Technology. He has resided in Houston for several years and is the father of two sons."

Bob Breyer writes from Los Angeles: "I have been very much ashamed of myself for never having written anything in to The Review with reference to myself. However, have been pegging away the last few years to make a living, and it has kept me somewhat busy. Was awfully glad to see Denison out here last year. He certainly is doing a lot of good."

"I have been out here in Los Angeles since 1912. Another fellow and myself, John J. Troy, Class of 1911, Dartmouth, are partners in the distribution of Nash motor cars for Southern California, Arizona and Southern Nevada. We believe we have a good thing, and if we are fortunate enough to get a little rain now and then, to say nothing of not having an earthquake, we expect to make enough money to get back to Boston once in a while."

Dudley Clapp, *Secretary*,

15 Draper Avenue, Arlington, Mass.

R. O. Fernandez, *Assistant Secretary*,

264 W. Emerson Street, Melrose, Mass.

'11

Before these notes make their appearance '11-ers will have been advised by mail that a week-end party for Saturday, June 13 and Sunday, June 14, the two days immediately following the 1925 All-Technology Reunion, has been arranged. The Class of 1907 has invited us to share the Manchester Country Club, Manchester, N. H., for that week-end and what could be sweeter than that combination—"Seven: Come Eleven!" And so the Manchester Country Club it is for this informal Class get-together. Replies are beginning to come in pretty well from '11-ers answering "Yes" to the question: "Do you expect to attend the 1925 All-Technology Reunion" and it's time now that every one of you make your plans to be here in June. Phil Caldwell, I, Harold Smith, II, and John Urquhart, XI, are the three Manchesterites who will act as hospitality committee for this little party and the charge per man should not be excessive.

Mr. and Mrs. A. T. Cushing of Kansas City announce the arrival of their second child, Donald Allston, weight 8¾ pounds, on January 13. Donald is just a bit over three years younger than his sister, Emma Mae. Cushing, I, says the young lad is "of course going to Tech in due time" Hearty congratulations, proud parents!

It has recently been called to my attention that I did Art Leary, I, a grave injustice when in the 1911 notes on page 152 of the January Review I said: "During the war and thereafter was at Fore River plant." The truth of the matter is that early in 1918, in order to get into the army, Art resigned his position with a construction company, underwent an operation and spent three months convalescing, before he was accepted in the army. After "doing his trick," as he expresses it, in the army, he got his honorable discharge sometime after the Armistice and his first connection with Fore River was in February, 1919. I certainly regret this inaccuracy and I wish here to publicly apologize to Art for my careless misstatement.

We had a most enjoyable Class dinner in Walker Memorial on Friday, the thirteenth of February, at which there were fifteen Eleveners present: E. J. Batty, II; Oberlin Clark, II; M. E. Comstock, VI; Art Coupal, II; Dennie Denison, VI; Cal Eldred, VI; Ned Hall, II; Phil Kerr, II; Max Kushlan, VI; Charlie McManus, I; Ted Parker, I; O. W. Stewart, I; Ted Van Tassel, X; Emmons Whitcomb, X; and Gordon Wilkes, II. Eldred and Kushlan were both making their local debut, comparatively speaking, so as is our wont we gave each an opportunity to tell of his progress since the halcyon days (that's a pretty good expression).

Kushlan went out to Indiana on construction for Stone & Webster shortly after graduating, and he remained with S. & W. for two years. Then he went out to Chicago with the city engineering department. During Mayor Thompson's mal-administration the engineers were "given the gate" according to Max, and accordingly he returned East and got back into construction, first in Boston and later in New York. Just before returning to Boston and again joining forces with Stone & Webster two years ago, Max spent some time with the Brooklyn Edison Company. At present he is in the engineering department of S. & W. here in Boston.

Eldred carried on two years of research at Tech, after graduating, and then embarked on a teaching career. He was successively on the faculties of Pratt Institute (Brooklyn, N. Y.), Northeastern (Boston, Mass.), Georgia Tech (Atlanta, Ga.), and Rensselaer Polytech (Troy, N. Y.). Then he went into industrial life with the John A. Manning Paper Company and the Manning Abrasive Company in Troy. He was in charge of construction work as well as in production engineering. Last fall he accepted an offer from the Hollingsworth & Vose Paper Company and is now with that concern at the Walpole branch, in charge of the mechanical work and engineering features, as well as plant operation.

After the dinner and the chat-around, the party as usual ad-

Our ARCHITECTURAL READERS

FOUR TIMES every year, *The Technology Review* publishes in its pages "The Architectural Bulletin." These four issues—the December, February, April and July, reach an augmented body of readers, 1200 practising architects, designers and architectural draughtsmen in addition to the industrial and engineering executives who comprise the great bulk of readers. A limited amount of advertising space in this new section is now available to those who are interested in bringing their products or services to the attention of this group. For information, address ROOM 3-205, MASSACHUSETTS INSTITUTE OF TECHNOLOGY.

The TECHNOLOGY REVIEW

1911 Continued

journed to the bowling alleys, although Eldred and Hall had to leave. Batty, Stewart, Clark and Old Man Average took four points from Kushlan, McManus, Parker and Wilkes, while Coupal, Denison and Whitcomb took three out of four points from Kerr, Comstock and Van Tassel. Charlie McManus with 106 had the highest single and O. W. Stewart with 266 the highest three-string total. Some rolling!

I visited the Technology Club of New Hampshire at Manchester on the evening of Saturday, February 21, and Harold Smith and John Urquhart were present, but unfortunately Phil Caldwell was away on a business trip, Paul Pearson didn't come down from Concord, and Harold Davis didn't come up from Nashua. I learned while there that G. Arthur Brown, X, is now in Chamblay, Canton, P. Q., with Bennett, Ltd.

Chet Pepper, II, is now selling Mack trucks and Bill Hodgman, II, is, so rumor goes, perfecting some new water pipe safety devices. President Stratton recently appointed our classmate, Donald W. Southgate, IV, who is practicing architecture in Nashville, Tenn., as the representative of M. I. T. at the fiftieth anniversary of the founding of George Peabody College for Teachers at Nashville, held February 18, 19, and 20. Frank Wood reports that he and his family have moved into a new six-room cottage house at 104 Lovett St., Peabody, Mass., and David, aged two, christened it by falling down the front stairs and emerging with some bump and a swelled bean.

It sure will seem good to see all you '11-ers back here in June and it goes without saying that we'll have a big number here. Don't be among the disappointed few who in late June or early July will ruefully say: "Gee, why didn't I go!"

Orville B. Denison, *Secretary*,
Room 3-207, M. I. T., Cambridge A, Mass.
John A. Herlihy, *Assistant Secretary*,
588 Riverside Avenue, Medford, Mass.

'12 We have the pleasure of announcing the marriage of Miss Hope Morrison to Mr. Max C. Mason, on October 4, 1924. Mr. and Mrs. Mason are living at 66 The Fenway. Max is with Stone & Webster, having been with them ever since graduation.—John Barry writes in that things are very much the same with him. He is looking after the finances of the Cynthia Mills in East Boston.—B. H. Morash is with the Taylor Engineering & Manufacturing Company, Foreign Sales Dept., 104 Pearl St., New York City.

The Malden News of January 14 states that Cyrus Springall, well-known architect, has been offered the building inspectorship of Malden by Mayor Dever. The Mayor states that he fully realizes the sacrifice that Cy would have to make abandoning his private practice to go to work for the city, but nevertheless is urging him to push private interests aside and place the building department on a firm foundation. He states that Cy has always shown a fine public spirit in all matters and that he hopes he will not fail his fellow-townsmen at this critical moment.

Professor Erwin S. Schell, is, in addition to his connection with Harvard University, on the lecturing staff of the Katharine Gibbs School of Boston. The young ladies are being acquainted with the subject of—"Business Administration and Personnel," by Weenie.

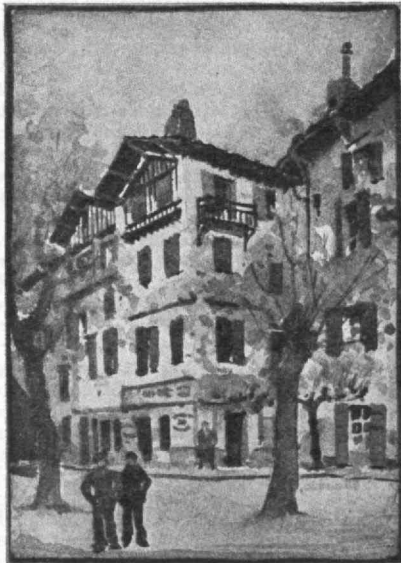
The New York contingent of 1912 is active as usual and are conducting monthly luncheons at the Technology Club.—Bill Baxter, III, is among their new recruits. Bill is a member of the firm known as the Nitrogen Engineering Company, 17 East 42nd St., New York. He is living in New Rochelle. The company specializes in the design and construction of Synthetic Ammonia Plants.—Harold D. Mitchell is another newcomer. He lives at 601 Ocean Ave., Brooklyn, N. Y.—F. J. Osborne gets in on the D. L. & W. from East Orange, N. J., from which town he signs his name as Health Officer. Bob Wiseman, VI, is now in Europe on business for the Okonite Company of Passaic, N. J. Bob has made the trip several times in the past year and I believe that the Okonite Company have made connections with the Collander Company of England, one of the largest wire manufacturers on the other side.

At the February lunch, there were nine members present: Morash, Coddling, Cook, E. N. Mason, Brackett, Priest, McGrath, Osborne and L. A. Mathews.—Mathews is another newcomer and is with the Pease Laboratories, Department of Bacteriology, 39 W. 38th St., New York City. Dave McGrath is trying to subsidize Osborne and Pease to get up a successful serum or antitoxin for horse asthma, with which he is afflicted. The discussion, however, tended toward the much-talked-of oyster and Dave was left to suffer.

It is with deep regret that we announce the death of Charles M. Whitmore, VI, who passed away at Worcester, Mass., on December 3, 1924.

Your Secretary has written a number of letters asking whether or not the Class was in favor of holding a two-day reunion following the general reunion on June 11 and 12. Replies to date seem to favor

Great Architectural Designers



Sketch by Samuel V. Chamberlain
at St. Jean-De-Luz

Richardson, Corbett, Goodhue, Bosworth—these names alone are an inspiration to those making their life work architecture, for these men stand out among the leaders in architectural designing.

In order that you may know the methods employed by them in their daily work and profit through their experiences—Mr. J. H. Phillips is writing a series of articles for THE AMERICAN ARCHITECT on "Great Architectural Designers and Their Working Methods."

Other articles that will be of interest are:

Architectural Rendering
ROBERT VON ESDORF
Architectural Rambles in America
CARL A. ZIEGLER
Architectural Rambles in France
SAMUEL CHAMBERLAIN
Architecture as an Inspiration
F. S. LAURENCE

THE AMERICAN ARCHITECT will supply you in the course of a year, in its 26 issues, with nearly twice as much material in the way of plates and illustrated text pages as is supplied by any of its contemporaries.

You will receive over 400 beautiful duotone plate pages and 1200 illustrated text pages.

For students, the subscription price of THE AMERICAN ARCHITECT is \$5.00 per year. Our M. I. T. representative, Mr. Herbert L. Beckwith, will be glad to arrange for you to receive our publication regularly.

THE AMERICAN ARCHITECT
243 W. 39th Street New York

1912 Continued

this. Won't you drop a line giving me your ideas of what is wanted? Personally, I believe it should be done, as we'll sure have a grand good time. Obey that impulse and write!

Frederick J. Shepard, Jr., *Secretary*,
568 East First Street, South Boston, Mass.

D. J. McGrath, *Assistant Secretary*,

Technology Club of New York, 17 Gramercy Park, New York, N. Y.

13 It is with the deepest sorrow that I must tell of the death of Roger Freeman, on January 21. The Class and the community share a distinct loss for Roger was an unusually public-spirited classmate and an engineer of exceptional ability and attainment. A 1910 man once told me of the parting advice of Professor Swain to his graduating classes, "Be bold, be not too bold." Roger was a bold engineer and his talents were best employed on works of unusually large magnitude. Roger's inheritance was an enviable one. Certainly no engineer in this country, in his line of work, has larger achievements than John R. Freeman, an Institute graduate, Roger's father. I am pleased to quote a letter from Mr. Freeman. "I have your letter of February 9, and appreciate your sympathy. It is hard to conceive of a harder blow because Roger was coming along in nearly my own lines of thought and action, more than any of my other sons, and we had been making great plans for uniting our efforts during the coming year.

"The past is full of pleasant memories and we have had some long and delightful trips together in recent years, two separate visits in California of a month or six weeks each; a long tour down the Mississippi watching the behavior of the Father of Waters at many points in the greatest flood of recent years; a visit to Panama and a subsequent tour of Jamaica.

"The Sunday before his death he came down with his two children to have lunch with me at the Waldorf-Astoria, where I was quartered, temporarily, as a member of the Committee on the Chicago Lake Levels and Diversion question. He was then apparently in perfect health and told his wife during the afternoon of what a happy time we had had together for a few hours, and that everything seemed to be now coming his way. He was taken that night with severe pains which he thought came from ptomaine poisoning and so made the mistake of taking purgatives instead of sending at once for a doctor. But we had no apprehension of the outcome until a warning came from the doctor, which hurried us to his bedside, an hour before his

death. There was a complication of heart failure and peritonitis. No one of us had dreamed that his magnificent physique would not carry him through.

"To help you in your notice for The Review I am sending you a little advertisement booklet which he sent out at the time of first establishing his New York office. Since that time he has carried to successful completion the design and construction of a 10,000 H. P. hydro-electric plant on the Tippecanoe River at Norway, Ind.; and was just now in the midst of designing and supervising the construction of a larger plant of about 15,000 H. P. on the same river a few miles downstream.

"The managers (the Insulls of Chicago) after a period of hesitation, made a sudden start and Roger accepted the challenge of keeping ahead of the workmen with plans no matter how fast they might rush the job. He had been working regularly nights until ten or twelve p.m., and was becoming very tired, but had kept ahead all right.

"The men in his organization, chief among whom is Fritz Blomquist, are intensely loyal and we are all doing our best to complete the job just as Roger would have liked. I am spending from two to four days at his office filling in the gaps. There are now about eight hundred men on the job, but the designing had been eighty or ninety per cent completed, and substantially everything put on paper in pencil form, and the main contracts all placed, which makes it much easier.

"As quickly as I can get in the proper state of mind I am going to write up a little pamphlet of perhaps twenty pages, because I think his accomplishments deserve more than ordinary notice. Actually he had designed and built structures of greater value in his short career than comes within the opportunities of most engineers who attain a full three-score years and ten; and as was remarked to me yesterday in New York by the Vice-President of the Middle West Utilities Company: 'We were so well pleased with his first job that we gave him this second job at Oakdale without competition and trusted him to drive ahead without a written contract.'

"The following article appeared in the *Providence Journal*: 'Roger Morse Freeman, construction and consulting engineer of New York, a son of John R. Freeman, eminent consulting engineer of this city, died at about 7.50 o'clock last night in New York of heart failure following a severe attack of appendicitis. He was in his thirty-third year.

"With Mr. Freeman at the time of his death were his father and mother, his wife and two children and a brother. He first complained of illness, which physicians diagnosed as appendicitis, last Sunday. The shock of the attack is believed by physicians to have affected his heart which had probably been weakened by his participation in nearly all major branches of athletics while a student at Hope High School in this city.

"Though a young man, Mr. Freeman was a consulting and construction engineer of high ability and gave promise of achieving in his chosen field the eminence enjoyed by his father, whose work the young man was gradually taking over. During the war he was in charge of several important engineering projects for the Government and since that time had conducted a business of his own, specializing in dam-building and hydraulic engineering in the Middle West.

"Mr. Freeman was born in Winchester, Mass., on July 20, 1892. He was about three years old when his father came with his family to this city. Here he attended the public schools, finishing his common school education as a graduate of Hope High School in 1908. Later he entered M. I. T., graduating from that institution, the alma mater of his father, in 1913. Subsequently, he pursued his engineering studies at the University of Charlottenburg in Germany.

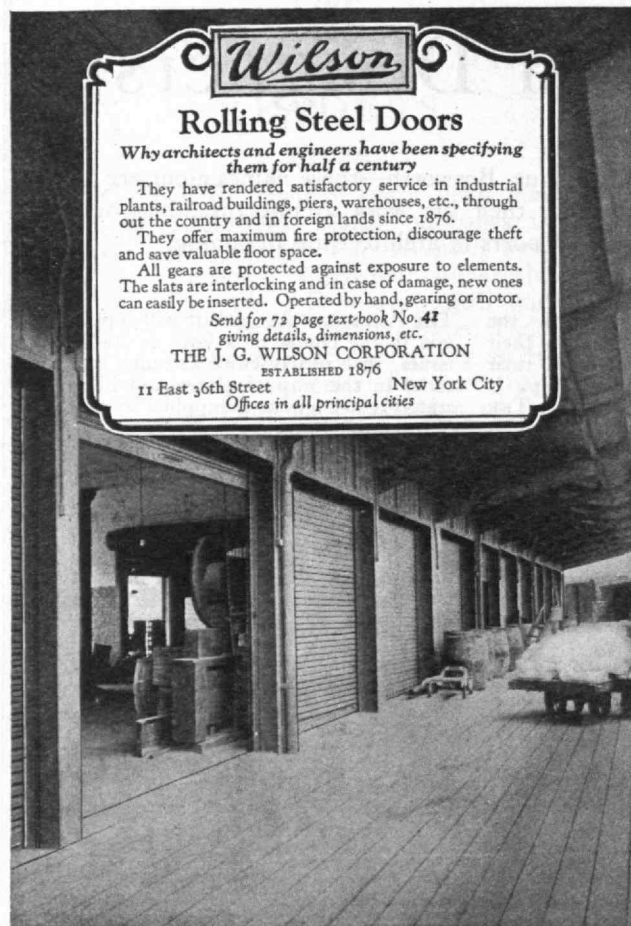
"Upon his return from Europe, Mr. Freeman was for about two years an assistant to his father, receiving in that capacity the careful training that led to his success in later years in Government service and in the employ of private engineering companies. After leaving his father's business, Mr. Freeman was for a while employed by the Turner Construction Company at Thomaston, Conn. Later he worked for the Chase Company of Waterbury, Conn., and while connected with that concern was the engineer in charge of construction of buildings costing \$5,000,000.

"When the United States entered the war he was called into the service of the Navy Department. In his capacity as a Government engineer he built the great armor-plate plant at Charleston, W. Va., and other Government plants at Erie, Pa.

"Mr. Freeman was an all-around athlete and during his high school days in Providence played on hockey, football and baseball teams, being a captain of each.

"While at Thomaston, Conn., Mr. Freeman married Miss Mary Bradstreet of that town, who survives. There are also two children, Anne Bradstreet Freeman, aged five, and Roger Morse Freeman, Jr."

On January 30, the Lowell, Mass., *Sun*, printed this article, "The great re-organization sale which opened to-day at Macartney's Apparel Shop in Merrimack St., marks the entrance of a new member into the firm of the R. J. Macartney Company. This new member



Wilson

Rolling Steel Doors

Why architects and engineers have been specifying them for half a century

They have rendered satisfactory service in industrial plants, railroad buildings, piers, warehouses, etc., through out the country and in foreign lands since 1876.

They offer maximum fire protection, discourage theft and save valuable floor space.

All gears are protected against exposure to elements. The slats are interlocking and in case of damage, new ones can easily be inserted. Operated by hand, gearing or motor.

Send for 72 page text-book No. 42 giving details, dimensions, etc.

THE J. G. WILSON CORPORATION
ESTABLISHED 1876
11 East 36th Street New York City
Offices in all principal cities

1913 Continued

is William N. Flanders, formerly of Lawrence, and son of one of the foremost and best known surgeons of that city. Mr. Flanders, son-in-law of R. J. Macartney, was graduated from the Massachusetts Institute of Technology in 1913. He became identified with the Hooker Electrochemical Company in the plant of that company at Niagara Falls, N. Y. He has been there until his recent decision to associate himself with the R. J. Macartney Company as a member of the firm. Gardner M. Macartney will continue as the head of the well-known store in this city, while his brother, Amherst Macartney, will be the manager of the company's store in Lawrence. Mr. Flanders will divide his time between the two stores."

Jack Horsch, '14, contributes the following: "Probably the lame and the blind get a more bountiful response than the Secretary's pathetic pleading for just a little meat for the '12-'14 sandwich. Recently took a job as chief chemist with the Vulcan Dentining Company, P. O. Box 946, Pittsburgh, Pa. I always had a curiosity to see what real smoke and fog were like; now I'm satisfied. Please send me the 'rest of the series' including any I may have missed. I note Claude Cairns has broken into national advertising: The Acme Apparatus Company."

Allen Wood Spicer is an assistant traffic manager with the New York Telephone Company. Hap Peck has the congratulations of his classmates on his having passed the bar exams. Hap was one of the six '13 men who attended the Alumni Banquet in January.

Fred D. Murdock, *Secretary*,
30 Bartlett Avenue, Arlington, Mass.

'14

Frank Dunn went ahead with his great event even after all the advice he received from other Fourteeners at the February luncheon. The Boston *Globe* made the following note of the event: "Miss Evelyn S. Greeley, daughter of Dr. and Mrs. Charles R. Greeley of 671 Main St., South Weymouth, and Frank E. Dunn, son of Mr. and Mrs. William F. Dunn of Main St., South Weymouth, were married last night in the home of the bride's parents. The ceremony was performed at 8 o'clock by Rev. Dr. Charles P. Morgan, of Belmont, a cousin of the bride, who married the bride's parents forty-six years ago. The bride is a graduate of Mt. Holyoke College, Class of 1920, and of the Pierce School, Boston, and is a well-known church soprano. The groom is a graduate of the Melrose High School and the Institute of Technology, Class of 1914. Upon their return from a wedding trip Mr. and Mrs. Dunn will live at 609 Main St., South Weymouth."

At the February luncheon, Boggs Morrison discussed the subject of "Purity" but confined his remarks largely to soap making. He succeeded in getting many converts, but largely by means of free sticks of shaving soap and cakes of Lux. Both Boggs Morrison and Harry Wylde are with Lever Brothers at Cambridge and as the Class found Boggs' talk so interesting, arrangements were made to have Wylde give the next talk followed by an inspection trip of Lever Brothers' Cambridge factory. Those attending the February luncheon were Blakeley, Johnson, Dunn, Wylde, H. S. Wilkins, Adams, Waitt, Crocker, Morrison, Atwood, Perley, and Richmond.

If you think Fourteeners are lacking in grey matter just listen to the summary of Patent 1,511,619 recently issued to J. W. Horton. "Relates to the production of any required harmonic frequency wave, or a series of such waves from a given sine wave of fundamental frequency. The fundamental wave is obtained from a source of known or standard frequency, while the harmonic wave is produced by passing the wave disturbance derived from the fundamental wave through a progressive series of operations which involve breaking up or distorting the wave and synthesizing or uniting certain of the resulting wave components to form the required waves." Wheel!

Ralph D. Bates has resigned from the Clarksburg, West Virginia, Water Works, where he had charge of the Filtration plant to become Assistant Sanitarian in the Division of Sanitation of the New York State Department of Health. Bates' new work consists principally of supervision of water purification plants and also some sewage disposal work.

Deac Barns has added his name to the already long list of Fourteeners who have gone in business for themselves. His announcement card states that he is associated with Harry A. Helling under the name of Helling-Barns, Inc., and is located at 151 East 21st Street, New York City. Helling-Barns, Inc., specializes in the construction of industrial buildings, concrete structures, water works, sewage disposal, systems and power plants, including electrical and mechanical installations.

We are glad to learn that Louis Wilson, who is with the New Jersey Zinc Company at Palmerton, Pa., has recovered from his very severe attack of pneumonia.

Are you all set for the All-Technology Reunion June 11 and 12? Fourteen will hold a reunion of some sort the following day. What type of affair do you want? Write your secretary and we will have a reunion to suit you!

H. B. Richmond, *Secretary*,
100 Gray Street, Arlington, Mass.
G. K. Perley, *Assistant Secretary*,
45 Hill Side Terrace, Belmont, Mass.

SHOP LIGHTING.

In an address delivered before the members of the Western Pennsylvania Division of the National Safety Council, Pittsburgh, Pa., March, 1918, by C. W. Price, the importance of good lighting in industrial establishments was discussed, and the disadvantages of poor lighting were clearly shown by some figures mentioned by Mr. Price.

A large insurance company analyzed 91,000 accident reports, for the purpose of discovering the causes of these mishaps. It was found that 10% was directly traceable to inadequate lighting and in 13.8% the same cause was a contributory factor. The British Government in a report of the investigation of causes of accidents determined a close parallel to the findings of the insurance company above quoted. The British investigators found that by comparing the four winter months with the four summer months, there were 39.5% more men injured by stumbling and falling in winter than in summer.

Mr. John Calder, a pioneer in safety work, made an investigation of accident statistics covering 80,000 industrial plants. His analysis covered 700 accidental deaths, and of these 45% more occurred during the four winter months than during the four summer months.

Mr. C. L. Eschleman, in a paper published in the proceedings of the American Institute of Electrical Engineers several years ago, reported the result of an investigation of a large number of plants in which efficient lighting had been installed. He found that in such plants as steel mills, where the work is of a coarse nature, efficient lighting increased the total output 2%; in plants, such as textile mills and shoe factories, the output was increased 10%.

In an investigation of the causes of eye fatigue, made by the Industrial Commission of Wisconsin, it was found that in a large percentage of industries, such as shoe, clothing and textile factories, the lack of proper lighting (both natural and artificial) resulted in eye fatigue and loss of efficiency. At one knitting mill, where a girl was doing close work under improper lighting conditions, her efficiency dropped 50% every day during the hours from 2:30 to 5:30 P. M.

The above mentioned incidents indicate how important a factor lighting is in the operation of the industrial plant. It has been well said, "Light is a tool, which increases the efficiency of every tool in the plant." Glare or too much light is as harmful as not enough lighting, and in no case should the eyes of the workers be exposed to direct rays, either of sun or electric light.

Windows and reflectors should always be kept clean; that is, cleaning them at least once a week, for where dust and dirt are allowed to collect, efficiency of the light is decreased as much as 25%.

Good lighting, in addition to its other marked advantages, is a strong incentive towards keeping working places clean, for it clearly exposes any place where dirt or other material has been allowed to collect. White walls and clean windows glazed with Factrolite Glass will eliminate the sun glare and increase the illumination 25 to 50 feet from the window from 38% to 72% as compared with plain glass.

Lighting is of primary importance to every employer and fully warrants a careful investigation of the subject, for there is no substitute for good lighting, and if it is not supplied the efficiency of the entire working force must suffer a serious reduction.

If you are interested in the distribution of light through Factrolite, we will send you a copy of Laboratory Report—"Factrolited."

MISSISSIPPI WIRE GLASS CO.,

220 Fifth Avenue,

St. Louis

New York

Chicago

'15 There is very little news to offer in this issue. The plans for the All-Technology Reunion and 1915 Reunion are both progressing, and I hope that everyone is making up his mind definitely that he will be on hand.

The following interesting letter from Andy is full of important news: "I've been on the verge of writing several times lately and here I am. If this isn't the night of the end of the world then you'll probably receive this epistle. Have not seen so many notes from Fifteneers in The Review of late but I suppose that they all write about as often as I do. It's a long time since I scribbled and a few things have happened since then. The most important event to note is that I finally stepped out a few months ago and joined the rest of you old married men. Yes, Tommie, I dropped in the Little Church Around the Corner here in New York on October 29, and took unto myself a wife. The unfortunate girl called herself Alys Lamere before that date, but now she's just Mrs. Anderson. Can't complain at all, Tommie; I like it. We took a little trip to Cuba just to get better acquainted and now we are back here at 514 Bay Ridge Ave., and getting on fine. Any time you reach the big town look us up, ring Atlanta 1124, so that we can stay in to welcome you. You probably know that Les Morse and his army are on their way to Hawaii. Les and family made their farewell stop at our place. He is due in Frisco about the eighteenth of this month. Les has two wonderful kids. Working as usual, still on the Vehicular Tunnel, which is nearing completion. Some day soon we will have to look for another job. If everything goes smoothly I expect to be up at the Ten-Year Reunion. Must be planning a wild old time, since it is going to be stag. Round up George T. Rooney and I'll be there to complete the battery that played at the graduation picnic. I played only one game last year and served behind the bat. I used to be an infielder when Larry Quirk was in his prime, but as I get older (maybe I am slowing up a bit) I have moved behind the bat. I'll be there with bells on at the picnic just the same as in 1915. Don't see anybody from '15 except Howard King who is with us over in Jersey. That's all the news, Tommie, and I've got to tear myself away from here soon to work on the midnight shift. Remember me to everybody."

Frank P. Scully, *Secretary*,
118 First Street, East Cambridge, Mass.
Howard C. Thomas, *Assistant Secretary*,
100 Floral Street, Newton Highlands, Mass.

'16 During the past three months your Secretary has received very little news from the members of the Class. Unless you write occasionally you will read, "No news received from the secretary," so it is up to each and everyone who receives this Review to send a letter at once. From the few replies received regarding our Ten-Year Reunion, most of the members prefer 1926, as it will not be possible for them to attend this coming June. Don't forget the 1925 All-Technology Reunion, June 11 and 12. So far, only seven men outside of New England have said they plan to be present. Some months ago Rusty White and Knight Owen formed what they called the "dizzy dozen" out on the Pacific Coast and planned to have a large number of the Class present at the 1925 Reunion. What can Rusty or Knight tell us now? Don't forget the good times we had in 1916; plan to be in Boston in June.

Bob Allen who for the past four years has been running a hotel at Daytona, Fla., has come back, and is working for a radio magazine at Philadelphia. For a short time he was located here in Boston, but left recently for the head office in Pennsylvania.—N. Julien Thompson, the 1916 Paderewski, is now located at 40 Irving St., Melrose, Mass.—Capt. Paul Duff is stationed at Dallas, Texas.—Oden Pyle, Jr.'s address is 34 Nesmith St., Lowell, Mass.—Capt. Chas. Reed is stationed at the Picatinny Arsenal, Dover, N. J.—Rusty White is back in Seattle, Wash., with Trick and Murray.

Prof. Bob Wilson has written as follows: "I note from The Review that you are taking a vote on the date for our Reunion. Please record me in favor of 1926 as I could come then and probably not in '25 on account of going to California. Sorry I have no news; work is very interesting and going well; I have been spending about one third of my time on a patent suit. Oh, yes, I was elected an alumni trustee of Wooster College (Ohio) last spring. That makes one feel old."

From the Boston *Traveler* of December 9, 1924: "Everett B. Johnson, formerly health officer at Watertown, will soon begin his new duties as health officer and bacteriologist of the Framingham Board of Health. He has long been connected with the public health service. He was stationed in Watertown during the war when he entered the United States Public Health Service, and was in charge of malarial control work at the cantonments around Montgomery, Ala. He afterwards engaged in research work for the Rockefeller Foundation and then for the state."

Edward Weissbach has sent a very interesting letter as follows: "Your cryptic announcement in the December Review while true, almost makes me blush for sending you a notice without a letter. Same wife, same job, same house. If anyone in '16 has ever worried about removing condensation from paper-mill roofs, he has my sympathy, for that is our sole worry out here in Cincinnati just now. Henry Shepard dropped off to see us here last spring, and it looked good to see a familiar face fresh from Boston. Hen journeyed on to St. Louis, and ran into Vert Young. Not long after that I heard Vert's melodious voice one summer day, and as a result Mr. and Mrs. Young came out to see us."

"The Cincinnati, Dayton, and Indianapolis Tech Clubs had a get-together dinner at Cedar Springs Hotel—not far from Richmond, Ind., just within easy motoring distance for all of us. There must have been about fifty of the faithful there. The Cincinnati bunch liked it so well that we had a week-end meeting of the Club there later on. Our old friend Howard B. Luther (whom most of us had in hydraulics) besides being a professor of civil engineering at the University of Cincinnati, and President of the Cincinnati Tech Club, is no slouch at bridge. Fortunately, I was his partner."

"On Labor Day we had 'Swan Song' outing on the Whitewater River . . . mostly fresh water swimming. I seem to be the only local member of '16 who gets out to these meetings, but we always take the ladies along and so are bound to have a good time."

"We have just had a great loss in the Tech Club here in the death of R. W. Proctor, '93. He was a most genial and friendly man, welcoming new and younger members in a way that made one feel glad to have come to Cincinnati, and glad to be associated with a man of his calibre in the Technology Club."

"Can't we get a letter some time out of Ingle on Singapore? Flip Fleming could make Johnny come across."

From the Boston *Globe* of January 4: "Henry B. Shepard of Auburndale, Mass., a manufacturer, and Miss Frances G. Dudley, daughter of Mr. and Mrs. Albertus T. Dudley of Exeter, N. H., were married this afternoon at the bride's home. The bride is a graduate of Milton Academy. The groom is a son of Mr. and Mrs. Frederick J. Shepard of Derry, N. H. He was a graduate of Andover in 1912 and four years later from Massachusetts Institute of Technology. During the war he served as ensign in the Naval Reserve Ordnance Department."

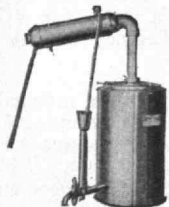
Allen D. Pettee, VI, has sent in the following: "If you are really up against it for Class news you may be able to fill in with a report that another electrical engineer, Daniel Starr Pattee, first saw the light of day on February 15, 1925, thus restoring the balance of the sexes which had been disturbed in 1922 by the advent of his sister. Their highly domesticated father, the writer, is still with the New York

The genuine Barnstead Water Still is identified by this Trade Mark.

Look for it. It is your protection.

The Sincerest Tribute

Barnstead Stills have always been made according to the highest standards. The inevitable result of their established leadership has been constant imitation. You can get genuine value and service if you specify



BARNSTEAD WATER STILLS

Models and capacities
1/4 to 100 gallons
an hour.

Let us send you the complete
Barnstead Still Handbook.

Barnstead Still and Sterilizer Co., Inc.
16 Lanesville Terrace, Boston 30, Mass.

BARNSTEAD
WATER STILLS

ONLY DISTILLED WATER

IS CHEMICALLY PURE

1916 Continued

Edison Company in the capacity of Assistant Engineer of the distribution department."

Have received a short note from Ralph A. Fletcher at West Chelmsford: "I have little of interest to say regarding myself, and practically nothing regarding classmates, as I seldom run across any. Since graduation I have been in the granite business except for a time in the navy during the war. Had the pleasure of selling some paving blocks to Jewett, '16, last summer, and I suppose you know he is one of our successful highway contractors in Massachusetts."

An interesting letter has been sent in from Allen L. Giles, who resides at 7 Newbury St., West Somerville, Mass.: "It has often been my intention as I have read periodically the Class Notes in The Review, to heed your summons and drop you a line, to tell you of my appreciation of the work you are doing in keeping us all posted on Class affairs. It is surprising, that while Tech men of almost any other class than ours may be seen frequently around Boston, yet the Sixteeners seem to have settled in other places. For that reason, I have practically no news to pass on to you, except my own story. Immediately after I left Tech, I went with the Aberthaw Construction Company and was assigned to their field construction forces. I traveled from one job to another for them in New England, till the war came. I then enlisted in the U. S. Naval Construction Corps, in which I served till about six months after the Armistice. I then returned to the Aberthaw Company, and was assigned to one of their jobs at Nashua, N. H., as a civil engineer. In August of that year, specifically, August 14, 1919, I was married to Miss Clara L. Collins, of Everett, Mass. After two years of construction life, the pleasures of light housekeeping and monthly home visits paled somewhat, and in February, 1921, I went to work for Monks & Johnson, in Boston, as designing engineer. The following year I changed location again, and I am now a member of the engineering division of Stone & Webster, Inc."

"December 26, 1924, marks a date that I must tell you about before I close this narrative, and that is, namely, the coming of Allen L. Giles, Jr. Only those who have been there know how it seems to welcome the first boy. The future engineer is in good health, and gaining rapidly, displaying the pep common to all Tech men, past, present or future. I have attended the Alumni dinners fairly regularly, and the association friendships I have resumed, always bring to mind Professor Talbot's parting advice,—to keep constantly in touch with the affairs of the Institute. In closing I would like to ask you to broadcast for some news from some of the following men, concerning none of whom have I seen any notes since commencement: E. Leo Ball, Chick Wallis, George H. Petit, William C. McDonald, William F. Howard, Steve Brophy, and O. B. Pyle."

Mr. and Mrs. Charles W. Lawrance of 638 Massachusetts Ave., Lexington, Mass., have a third son, William Irwin Lawrance, 2nd, born January 13, 1925.

D. N. Barker, *Secretary*.
14 Marathon Street, Arlington, Mass.

'17 It is necessary for us to contradict a rumor which connects Bill Hunter with the suspenders recently sent President Coolidge and the four Princeton boys who called at the White House with baggy trousers. Bill Hunter is no longer connected with the President Suspender Company which sent the galluses.

The All-Technology Reunion, which is to take place fairly soon, should see a goodly number of 1917 men on hand. We have not yet had official notification from 1917 men coming from a distance, but it is still a little early for this. There is quite a large group in and near Boston, and it is probable that at least one special get-together will be planned.

Gus Farnsworth was seen in Louisville during the last month, when he was on an extensive visit to Memphis, Louisville and other cities. He is reported married and living on Long Island.—Haig Solakian has been traveling in Europe, and made an extended tour through Greece, Italy and Egypt, where he was married last August. Solakian obtained his Doctor's Degree in Metallurgy at the Institute in June.—We have just had a word from John Harper. He is still in the sales department of the New England Oil Refining Company, living in Boston and a bachelor.

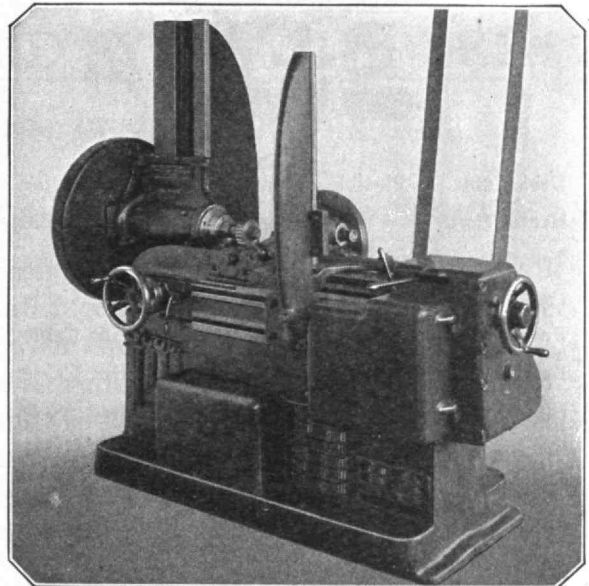
Dick Lyons says in part: "From the stationery you see that I am with the Skelly Oil Company (Tulsa, Oklahoma) as geologist. I am in the field a good part of the time, just at present in the town of Bristow, in the old Creek Indian Nation. We are hoping for a good year in the oil business and need about three to pay up for the past three years of depression. I have wandered a good bit since seeing you last, and have finally settled down in Tulsa."

Frank Hastie writes: "I have your letter of January 7, as Professor Robinson taught us to say. His Class in Public Speaking is one of my bright memories of the Institute. As you see by the above letterhead (West Virginia University, Military Division, Morgantown, West Virginia), I am now on R. O. T. C. duty with the usual title of Asst. P. M. S. & T. The work is interesting and it seems very natural to be at school again, though I would rather be on the other side of the fence with no responsibility. However, everything is very

Why these gears run quietly

There are two big reasons why Brown & Sharpe Automatic Gear Cutting Machines cut silent, smooth running gears. They are rigidly constructed so that they can take heavy, accurate cuts without setting up destructive vibrations. Also they have an extremely accurate index wheel of large diameter which insures accurate spacing of teeth. Gear Cutting Machines must have these two important features if they are to cut quiet running gears.

Brown & Sharpe Automatic Gear Cutting Machines, due to their lasting accuracy, are known and used all over the world.



BROWN & SHARPE MFG. CO.
PROVIDENCE, R. I., U. S. A.

1917 Continued

congenial though living is made somewhat difficult here by the fact that people build houses to live in rather than to rent—better arranged houses but poco in as dinero.

"We have been in Texas since September, 1922, and arrived here the end of September, 1924—made the trip in a Chevrolet with Bill (I have an English bulldog, fawn colored with a black face and a gentle soul). I am not very good pulling humor but I could always get by with a big hit by telling strangers to kick Bill out of their way—very few people realize how harmless an English bulldog really is. It seems quite a change to get back to dismounted duty where to prepare for a hike you harden your feet instead of your seat.

"During December I was a sojourner at Walter Reed in Washington, where I lost my tonsils, thereby saving myself appendicitis in the future. I made a record for consuming food after coming out of the ether. If you ever have them taken out under a general anesthetic remember, first, that your throat will be sore, anyway, and you might as well eat as soon as possible; second, that the first seven days are the worst—just about the time I expected to carry around a sore throat the rest of my life, it got better. I also became a radio fan—the whole place is full of headsets furnished by Roxy and his Gang—and I plan to buy myself a Radiola this fall. I was going to wait until they got rid of static, but why not enjoy oneself while young?

"We have added two to the table since 1920—Cecile, aged three and a half, and John, aged one. Bill is their pal. I thank you for your kind attention and I will now sign off."

Tharratt Gilbert Best says in part: "I took the big jump in matrimony in Grace Church, Utica, New York, December 19, 1923, being united in marriage with Helen Elizabeth Ney, daughter of Mr. and Mrs. Henry M. Ney of that city. We sailed shortly afterwards from New York on the 'Berengaria' and were away almost four months on a most wonderful honeymoon, visiting southern France, the Pyrenees and Riviera, Italy, Sicily, Austria and Switzerland.

"In September of the past year the board of directors of this bank elected me their President, to succeed my grandfather, who died the year before, and whose father, in turn, founded the institution.

"My other interests at this time are mainly in a large real estate development in the City of Utica, for suburban homes, and I am glad to report that I am not as yet so much of a banker but that I can supervise the engineering details on the project."

Raymond S. Stevens, *Secretary*,
30 Charles River Road, Cambridge, Mass.



Deck Cable	Flexible and Extra Flexible Conductor
Heater Cord	Moving Picture Machine Cable
Telephone Wires	High Voltage Wires and Cables
Packhouse Cord	Hard Service Portable Cable
Railway Signal Wires	Elevator Operating Cable
Battery Charging Cables	Elevator Lighting Cable
Elevator Annunciator Cable	Rubber Covered Wires
Flameproof Wires and Cables	Switchboard Cable
Solid and Stranded Conductor	Canvasite Cord
Lamp Cords and Reinforced Cords	Stage Cable
Automobile Ignition, Lighting and Starting Cables	

Quality of product is our first consideration

**BOSTON INSULATED WIRE
AND CABLE COMPANY**

Boston, Mass.

'18

There was a good turnout at the last monthly luncheon of the Boston crowd. About thirteen attended. The only business accomplished was the vote to give the Athletic Fund fifty dollars from the Class Treasury. This is the first time that the Class has contributed to an affair of the Institute since graduation. It was decided not to hold a Class celebration in connection with the spring Reunion in June. It was felt that it would be better to conserve the energy that would be so expended and apply it toward the Ten-Year Reunion, which is not now so far away.

The following professional card has been received: "Royal Barry Wills announces that he has opened an office for the practice of Architecture at Eight Beacon Street in Boston, Massachusetts."

The following clipping was taken from the January issue of *Mechanical Engineering*: "H. Loring Wirt, author of *The Turbine Designer's Wind Tunnel*, was graduated from the Massachusetts Institute of Technology in 1918, with a degree in Naval Architecture and Marine Engineering. During the war he was a Lieutenant in the Engineers Corps, U. S. A., serving overseas. He entered the employ of the General Electric Company in 1920 and since then has been in the turbine-engineering department, doing experimental research work, principally on the flow of elastic fluids."

The Boston papers of mid-January contained many accounts of the wedding of Ted Winslow and Miss Helen Hanscom of Lawrence, Mass. The *Boston Globe* of January 10 said: "Miss Helen D. Hanscom, daughter of Mr. and Mrs. Albert J. Hanscom of Lawrence, and Edward Nicholas Winslow, son of Mr. and Mrs. Theophilus Winslow of Elizabeth, N. J., were recently married at the home of the bride's parents. The bride was graduated from Abbott Academy in 1914 and from Miss Wheelock's School in 1917. The groom was a member of the Class of 1918 at the Massachusetts Institute of Technology. In 1917, he joined the Technology Ambulance Unit for service with the French Army and served two years."

George F. Halfacre has stood before the altar and the wedding bells have rung, but the exact date is not known. He is still with the Smelter Department of the New Jersey Zinc Company at Palmerton, Pa.

We have at hand a copy of the paper appearing in the December issue of *Industrial and Engineering Chemistry* entitled, *Quantitative Analysis of Mists and Fogs, especially Acid Mists*. This was the work of Harold Weber of our Class. He is now an Assistant Professor in charge of the Merrimac Chemical Station of Course X-A.

The Springfield, Mass., *Union* of January 11 offers some information concerning the extension courses to be given in that city and has the following to say about one of our men: "One lesson in concrete building will be given on each Thursday at Technical High School. J. Ernest Roy, superintendent of the J. G. Roy and Sons Company of this city, will conduct the course. Mr. Roy is a graduate of Worcester Tech and of Massachusetts Tech. He has been connected with the local company since 1907 except during the war when he was a lieutenant in the Construction Corps of the U. S. Navy at the Boston and Puget Sound Navy Yards."

P. W. Carr, *Secretary*,
400 Charles River Road, Cambridge, Mass.

'19

According to plans, the Class Dinner for men in the vicinity of Boston was held on Friday evening, February 27, in Walker Memorial. Twenty-seven of the fellows came, making it the largest turnout for any 1919 Class function so far. The dinner was held in the Faculty Dining room and a very good one it was, too. After the feast, everyone contributed news of himself and family in a round table discussion which was delightfully informal and entertaining. Finally, the Class championship in bowling was decided by selecting five teams to bowl two strings. Prizes went to Banks, Maynard, Hackett, and Gould. Bill Banks had the highest single score. Following this the crowd broke up, a number of the fellows going over to the Armory to the Tech Circus. The following men were present: W. S. Bailey, W. H. Banks, R. S. Bolan, H. J. Bruno, M. H. Clark, F. Coyne, E. F. Doten, J. M. Erving, M. E. Goodridge, J. H. Gould, R. P. Hackett, H. A. Herzog, R. S. Hunt, G. A. Irwin, A. C. Kenison, E. M. Kenison, W. F. Kimball, A. H. McIntosh, M. R. McKinley, E. R. McLaughlin, W. A. Maynard, A. E. Page, R. S. Palmer, H. P. Selya, P. D. Sheeline, G. H. Wiswall and P. F. Swasey. About twenty-five replies were received from men who could not be present, making about fifty replies from the two hundred cards sent out. H. S. Weymouth wrote from Dexter, Me., "Believe me, I would like to be there! But impossible this year." E. W. Sherman was in New York and could not get away, and F. O. Wyse, 614 Milwaukee St., Milwaukee Wis., wrote: "Very sorry but 'stoo far. Let me hear occasionally of the doings."

The following letter was received some time ago from our President, Don Way, concerning plans for a dinner in New York simultaneously with the Boston get-together. "George McCarten and I are both strong for a dinner on the twenty-seventh, and I am arranging to send out the notices tomorrow. I shall not know until tomorrow just where we will hold our gathering, but rather expect

1919 Continued

it will be the Technology Club. At any rate, I will let you know definitely later, and at the same time arrange for some sort of communication scheme between the gangs in New York and Boston." Said communication was not received in time for the dinner here, but we hope to have news of the New York crowd for next month's notes.

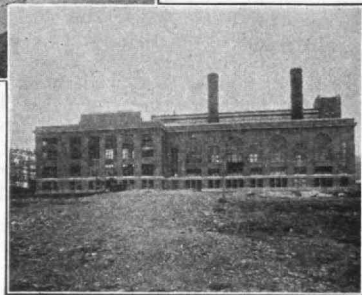
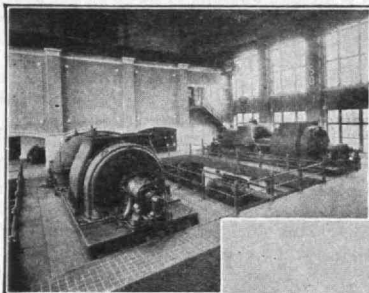
Roger T. Hall, Secretary of Course XI, did not succeed in gathering the clan in Washington, but he was inspired to send the following news, which is most welcome: "Greetings from the land of hot-air filibusters and stormy weather inaugural ceremonies. Please pardon my prolonged delay. I've been unable to derive sufficient inspiration from a minister's sermon on Sunday to answer your requests for news from this corner of the globe, and apparently it takes a dull, rainy Washington's birthday to stir up that enthusiasm. It seems to me that you've struck a really excellent idea in getting the members of the Class together in Boston and New York for an informal evening of enjoyment, and I should be delighted to be with you on that occasion and to do my share in making it a success. But when you suggest that I try to round up those of our Class who live somewhere near the Capitol City, I must show you why it can't be done. There are ten names on the list you submitted to me, four from the neighborhood of Baltimore, Md., and one as remote as Newport News, Va., and five from Washington, including myself. One of these five is Myles Connors who is now in New York, and that would leave a jolly assemblage of four, at the most. You might say, 'Well, why not summon those five non-residents to come to Washington?' and it would be a perfectly logical question. The answer is that towns forty or fifty miles from Washington are not so readily accessible as towns the same distance from Boston or New York, especially if they are in the direction of Virginia. Don't get the impression that I'm trying to 'crawl' because that is far from the fact of the matter; I would be pleased to be part of such a movement.

"Now, I'll try to give you a little news. As I said before, Myles Connors, who, since my arrival in Washington, has been one of my most loyal and congenial neighbors, has recently severed his connections with the railroad administration and hooked up in a real big way with a firm of Rothchild's, investment brokers, in New York. For the Christmas holidays the Hall family journeyed to the old home town of Arlington, Mass., and while there, I received a ten-minute visit from Les Jackson who was visiting his home in Lawrence and came all the way from Little Rock, Ark., leaving some fair one behind him. I talked him into arranging his return trip in such a way that he could pay us a visit in Washington and we had a glorious time here. One delightful feature of Washington, as a city for one's home, is the attraction it has for people from all over the

country. We've had beaucoup visitors in the short two years of our residence here and we can never tell when the telephone rings whether it is some friend from up New England way surprising us, or some local party. Lawrence Gillette dropped in and had dinner with us one day last fall; it was his first appearance since he stopped here in the fall of '23, on his way with his charming young bride to Florida, where he is giving his services, of course in return for a handsome cash settlement, to the Florida East Coast Railroad. He had been up to Philadelphia on business and had to make another business stop at Roanoke, Va., on his way back,—looked just the same as ever, said his better-half was fine and dandy and liked the Florida climate and oranges, and said that Horton, who is also with the same railroad, wished to be remembered to the Class.

"We received about a month ago a cute announcement done in Walt's style, of the birth of a little son. Heartiest congratulations to Mr. and Mrs. Walt F. Walworth! Have received no detailed information yet and can't say whether he will be a baseball player or not. The last heard from Walt was six months ago, but I imagine his time is well occupied with imparting engineering knowledge to his son and to the City of Lowell. I find that so long have I neglected to write news from our gang that Russell Smith's baby, born a year ago, has never been announced in *The Review*. He has a son who should make good material for Course XI, growing up in Chicago in an atmosphere of great sanitary engineering feats which seems bound to endure for some time to come. Maybe he'll be the one to solve the problem of Chicago's sewage disposal. Guess my time is about up now so will close with just a word about myself, with your permission. Friend Wife and I like the city better than ever and join in our praise of it except during June, July and August. The construction business, though, in this section, is not what I would like to see it—not as good as a year ago—but we're looking for a decided improvement daily. Best wishes for a glorious spring season."

Charlie Herrick sends this good word from Georgia: "It would certainly be fine if I could only be around Boston at the time of some of the reunions, but prospects do not seem to be very bright just at present,—however, perhaps, some day. We've been battling floods down here, as you have probably read, while I understand you're all busy these days digging out from under snowdrifts. That reminds me of another wish; to get into a snowdrift or on a toboggan or pair of skis or skates. I have very nearly forgotten what such things are like. However, we have our oyster roasts, turtle hunts, house parties and the like with all-the-year-around tennis, golf, etc., here, all of which affords plenty of pleasure. People take time down this way to enjoy them to a good extent. I almost forgot to tell you about the fried chicken which is one of my long suits. Hope you're



WIRED WITH SIMPLEX

PENN. CENTRAL POWER CO.

Saxton Substation

Day & Zimmermann, Inc., Engineers

Simplex Wires and Cables are rendering satisfactory service in many of the larger power stations of the country. Insulated with rubber, paper or varnished cambric and covered with braid, lead or steel armor, they are made for the particular conditions under which they are installed.

Why not submit your specifications to us?

SIMPLEX WIRE & CABLE CO.

Manufacturers

201 Devonshire St., Boston

CHICAGO
SAN FRANCISCO
NEW YORK

FACTORY
AND MAIN OFFICE
AT BOSTON

1919 Continued

all just fine back East. I am feeling mighty well myself and hope next time I'm home it will be my good fortune to see you."

A notice from the Alumni Office says that J. E. Cannell is on the staff of the Engineer of Exchange Fundamental Plans, New England Telephone and Telegraph Company in Boston, and we also located Maynard, McLaughlin and Russ Palmer with the same company in the roll call at the dinner.—M. E. Goodridge is with the Tenney Service in Revere.—George Irwin is in the automobile sales business for himself in East Boston.—W. S. Bailey and R. S. Hunt are teaching at Tech and the latter is studying for his Ph.D.

From Holyoke, Mass., comes the announcement of the engagement of Miss Marion Smith to F. G. C. Smith, Jr., of Greenwich, Conn. Miss Smith is a graduate of Wellesley, 1925, and I'm sure the Class sends heartiest congratulations to Fred!

We are glad to hear from Lawrence D. St. John in Glenbrook, Conn.: "On reading the '19 Class notes in the current issue of The Review I note that you are collecting a little in the way of class dues. I am inclosing my bit. I am with the West Virginia Pulp and Paper Company in New York on general engineering work. I have been married for a long time past and we have a husky two-year old, possible Tech man. With best regards."

All of which reminds me to tell you that there are ninety-seven active members of 1919 to date and we want some more. Have you sent in your dollar? If not, why not?

June 11, 12, and 13 are the dates for you to jot down for the All-Technology Reunion this year. There will be Institute Day on Thursday with a Jamboree Dinner at night, an Outing on Friday and Tech Night at the Pops, and on Saturday the Class is invited down here to Thompson's Island in Boston Harbor for a shore picnic with your families. Please save the dates. We shall count on seeing you!

Paul F. Swasey, *Secretary*,
Box 1486, Boston, Mass.

'20 No notes have been received by The Review Editors from the Secretary of this Class for inclusion in the April issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review office. Members of the Class having news or inquiries should address them to Kenneth F. Akers, Secretary, at 54 Dwight Street, Brookline, Mass.

MEMORANDUM

Send for The
Murray Printing
Company on our
next printing

Kendall Square
University 5650

'21 No notes have been received by The Review Editors from the Secretaries of this Class for inclusion in the April issue. The Secretary received the usual notification that copy was due, accompanied by such news as had been compiled in The Review office. Members of the Class having news or inquiries should address them to R. A. St. Laurent, Secretary, at 431 Oliver Street, Whiting, Indiana, or to Carole A. Clarke, Assistant Secretary, Northern Electric Company, Ltd., 121 Shearer Street, Montreal, Que.

'22 The recent earthquake seems to have played havoc with the notes of the Class in this issue. It landed Johnny Sallaway in Philadelphia, still, however, clasped to the bosom of the Crew-Levick Company (at their home office, 219 N. Broad St.). A splendid thing for Sally, but rendering his usual copious letter impossible. Harris McIntyre, it dumped in a heap in Providence, at an address still undetermined. No notes for Course XV. And apparently, it put the sending apparatus of Roger Carver, III and XII, and George Holderness, IV, completely out of gear. Roger has not been heard from and George telegraphed (telegraphed: do you get that? There's money in Architecture) regrets. All the more glory, then, for Fearing Pratt, VI, and Tom Gill, VIII and IX, who are represented below.

The most important thing the Immediately Undersigned has to do this month is to announce the approach of a Class Dinner to be held in mid-April—exact time and place to be announced later. At this affair, which will be sumptuous yet informal, luxurious yet inexpensive, will be discussed in fullest measure the plans for Twenty-Two's part in the coming All-Technology Reunion of June 11 and 12. Since this will be our first group gathering since 1922, save for the annual Alumni Dinner, plans are being laid for a large scale evening. Dennie will, of course, be present. We have hopes that we may be able to import Don Carpenter and Heine Horn from Wilkes-Barre solely for this occasion. Harris-Mac will disentangle himself from Providence for it. A great party. Ray Rundlett, recently and happily returned to Boston, is at the moment in executive session with himself on the plans. Other talent is rapidly being enlisted. Signups will be mailed on March 31 to all Twenty-Two men within twenty-five miles of Boston. Please watch for these, and return them promptly. This will be a non-missable dinner. Selah!

Eric F. Hodgins, *General Secretary*,
Room 3-205, M. I. T., Cambridge, Mass.

Course VI.

We wish there would be fewer "Silent Cals" in our Course so that more information would filter through concerning ourselves. However, we have received a meagre amount of news so her goes.

Danny Coogan has resigned as superintendent of Edward Bolfe Company's Trap Rock Quarry at Hartford, where he has been located for the past three years, and is now travelling for the Erie Steam Shovel Company out of Boston.

The following men have cast their lot and are still with the New England Telephone and Telegraph Company: George Gilman, VI-A, Joe Cook, VI, Parke Appel, VI, are on the staff of the engineer of outside plant. W. F. Potter, VI-A, is on the staff of the engineer of exchange fundamental plans. P. M. Kellogg, VI-A, is an engineering assistant in the metropolitan division. Tommy Williams, VI, is an assistant traffic manager at Springfield, Mass. Your Secretary is on the staff of the engineer of toll plans and radio.

Still other members of the Class are getting ready for a jump into the sea of nuptial bliss, while others have already taken the fatal plunge. The engagement of Miss Janet Mitchell to Mr. Charles T. Jackson is announced. Miss Mitchell, now a student at Radcliffe College, is a native of Pittston, Pa.—The marriage of Miss Lillian N. Burke of Framingham, a member of the secretarial staff of the *Boston Arena*, to Erwin Matheson Lord took place recently.

Fearing Pratt, *Secretary*,
120 Main Street, Hingham, Mass.

Course VIII and IX

The Secretary has received a letter from Louis Caldor, one of the trusty Eighters, who is now located in his own establishment at 17 West 42nd St., New York City. He isn't a consulting engineer, but he is a veritable source of information for engineers. If you wish to get the latest literature on your particular branch of engineering or business, consult Louis. He is always ready to see any of the crowd, and since he is conveniently located near the Public Library, he will, no doubt, have many callers.

Since I have been transferred to Philadelphia, I have met El Mink, Jack Sallaway and Bernie Gasser.

T. H. Gill, *Secretary*,
c/o Certain-teed Products Corporation, Philadelphia, Pa.

'23 The Gensec was evidently a little too optimistic over the quantity of mail that came in for the March Review, because we are once again scraping for enough news to fill our space in the paper. Funny how we hate to see our names in print, isn't it?

Do you realize that we have only one more issue of The Review before the All-Technology Reunion? Sit down and write your course secretary now, and tell him whether or not you expect to be in Cambridge, June 11 and 12.

One more thing. Some '23 men who subscribed to the Class endowment policy plan, have failed to meet their payments as they came due. The eyes of all the classes are on us to see how successfully the plan which we adopted will work out. We cannot afford to have the Class go on record as failing to meet its obligations, so don't delay any longer. Pay up right away and don't let your policy lapse. Don't forget it is a duty.

Robert E. Hendrie, *General Secretary*,
12 Newton Street, Cambridge, Mass.

Course II

We have one bit of news from Course II this month in the form of an engagement announcement from Anton K. Whitaker. Anton is engaged to Miss Maybelle Taylor of Akron, Ohio, in which city he is working in the aeronautical department of the Goodyear Rubber Company.

Harold B. Grey, *Secretary*,
Vitreous Steel Products Company, Nappanee, Ind.

Course III

E. D. Martin is back again with the New Jersey Zinc Company at Palmerton, Pa. He spent a year in France studying and returned early in December. He reports that he and Mrs. Martin had a fine year. Apparently he made good, because they waived the one year residence rule and gave him the degree of Doctor of Science.

B. P. Lane, *Secretary*,
725 Magnolia Avenue, Los Angeles, Calif.

Course VIII

Physicists, you at last have a Course Secretary! I have taken over the responsibility of keeping up the Course VIII end of '23 Class notes. Give me your cooperation, boys, and be sure to drop me a line with a little dope for the next Review.

The notes this month are not very voluminous but here's hoping for more next time. Bill Allis succeeded in getting his Master's Degree last October, for which we wish to congratulate him heartily. Shortly after, he packed up and went to the University of Nancy in France, where he recently received his Doctor's Degree in physics. More congratulations. Doing any running now-a-days, Bill?

Russell Conant couldn't resist the call of "Take Me Back To Tech," and is now back in the Electrical Lab of the Physics Department after spending a year with Cameron and Comstock.—Got a letter from Bastille a short time ago. He seems to be enjoying himself out at Amherst, where he teaches physics when not otherwise engaged.—Walt Dietz is with the Western Electric Company doing photo-electric work. He left Tech a year ago when he got his Master's Degree.—The last we heard from our wanderer, Allen Isaacson, he was with an automobile firm, we don't know what one, in their branch in China. We hope you will write to us, Allen, tell us how you like the Far East.—Bert Warren spent last year in the Mechanics Lab and this year he is studying and doing research work at the 'Stute.—The General Electric Company succeeded in grabbing Don Lovell and the last we heard, he was still with them.—Rumor has it that Ted Edison is working for his father and is married. Congratulations, Ted, let's hear your confirmation of the event.—Your Secretary is still at the 'Stute, and when not studying, is on duty in the frosh Physics Lab.

That's all the dope I could scrape up for this issue, but I'm relying on the gang to come across before the next one.

W. B. Greenough, *Secretary*,
Room 4-402, M. I. T., Cambridge A, Mass.

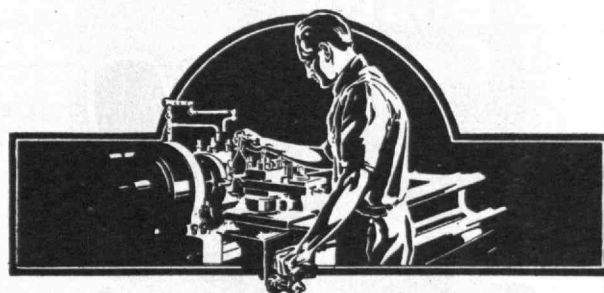
'24 Whenever I sit down to write the notes for our appearance in The Review, I always have to go through some train of thought like this:—"Let's see now. This is February 22, and these notes will not appear until after March 25, and then in an issue dated April. What will have happened by then and what is going to happen very shortly about which I should harangue the Class?"

Well, the first thing to mention is the 1924 Endowment Fund. Had a letter from Bill Robinson a few days ago and he said by the time the April issue appeared the notices from Aetna about premiums being due would be out. He told me of a trick card which they had fixed up to be put in every notice. I haven't seen it yet, but I hope it brings results. The more I think about it, the more I am convinced that this Endowment is a good idea, since as long as the premiums are paid the Institute is absolutely certain to receive \$250

from each man. I only wish there were some way of insuring each man against failure to pay his premium. Then we would be riding high for sure. The only kind of insurance which will do that, however, is self-insurance which means that each one of us has absolutely got to pay his premium. If he doesn't, the policy lapses and the Institute loses \$250. Experience in similar cases where wholesale endowment insurance has been sold, has shown a very marked falling off in the first anniversary payment. We can't let that happen. We led the classes in percentage of members of the Alumni Association. Let us now bind together again and lead the only other Class with an endowment, 1923. It will be hardest this year to pay that \$8.88. We are not in contact with that old undergraduate flame of enthusiasm and the \$8.88 represents a bigger share of our yearly income now than it will in subsequent years. Hence, so, and therefore, we (and that means you and I) must stand by our good resolutions of a year ago and send in our check. We were all glad we did it a year ago and we will all be glad we have continued to do so twenty-four years from now. That last sounds like a call for handkerchiefs, but I'm trying to think up all the arguments I can for the indifferent few. To sum up then, failure to pay means that the Institute loses \$250, and that you lose \$10.00, the amount you paid last year; that the Class loses the prestige which it has held among the classes of being the leader in everything; that you go back on your decision of a year ago; and that you lose caste among whoever of your Classmates hear of your reversed decision.

Why do I spend all this space on the Endowment? Just because I think it is so important and the officers of the Class want to keep the fund in tact. But if I don't ring off now on that subject, friend Hodgins will be suggesting that I print my own Reviews.

Still thinking five or six weeks ahead of time I am mindful of the approaching All-Technology Reunion. Other pages of this enlightened organ will explain in minute detail what will occur there. However, I doubt if you will find any reference to what 1924 will do as a corporate body. We are surely going to do something because you never yet have seen Bill Robinson miss a chance to advertise this Class of ours. On March 2 will be held (or was held, just as you wish) a 1924 get-together in Walker of everyone who could make it and who resides in or near Boston. They are to act as a committee to decide what will be done to feature 1924 in June. Complete details, therefore, will be published in the next appearance of these notes. One reason I brought the subject up now was so that you



Technical Subjects—Humanized

MANY folks think that there isn't much material for romance when confronted with the task of preparing interesting Catalogs and Booklets about cold subjects like Machinery and Tools. But we're very sure they are mistaken, our belief being based upon the things learned during the long years pleasantly spent in doing such work for Brown & Sharpe and many others.

All Tech men know that technical products can be presented as interestingly as any other product if the printer knows how to do it. The best evidence of what we can do for you is what we have done for others. We would enjoy presenting this "evidence."

THE BARTA PRESS

209 Massachusetts Ave.
Cambridge
Telephone: University 4600



Sales Plans
Illustrations, Engraving
Printing

1924 Continued

could speak for those few days when your boss comes around and starts talking vacation to you.

Sometimes, and tonight seems to be one of the times, I feel as if I should like to see 1924 painted on every flagpole, building, garage, apartment, state house and elevated car that I see, somewhat as it was over three years ago at Field Day. Did you ever feel that way? Believe me, if you never did, you ought to try it because it's good for what ails you. All of which explains why I seem so enthusiastic this time.

One fellow availed himself of the Secretary's card catalog. He wrote in through his Course Secretary asking for another's address. Strangely enough he did not know of the service, so-called, since through some small difficulty he had not been receiving *The Review*. This catalog has considerable of 1924 statistics in it, any part of which is available for the asking.

I'll have to put the pedals down soon, but before I do, I have a few notes collected here and there. Shorty Manning, II, our permanent treasurer, is with the General Motors Research Corporation, his address being 340 West First Street, Dayton, Ohio. Hank du Pont, Dave Meeker and Charlie Thomas are also with the same concern. Rock Hereford, XV, is with the Southern California Edison Company at Big Creek Camp 63, which has a wild west atmosphere evidently. Ed Taylor and Jim Peirce had their picture put in a rotogravure section of *The Tech*, the pose having been taken at Trinity College, Cambridge, England, sometime last summer. And another issue of *The Tech* had several 1924 men in it, the issue being that of February 9. Jack McCoy and Phil Bates are both in the chorus of Tech Show. Herb Stewart is one of the signers of a communication, the general subject of which concerned the venerable and time-honored cheers of M. I. T. And Paul Cardinal contributes another communication

in his inimitable manner, offering suggestion and criticism to *The Tech's* essayists.

All of which seems to be the sum and substance this month. See you all again in thirty days.

H. G. Donovan, *General Secretary*,
80 Farmington Avenue, Hartford, Conn.

Course I

I suppose my esteemed coursemates think I have passed away or done some other equally foolish thing. Nope, I'm still alive and drawing my pay from the Minnesota Power and Light Company. The only fellow who took a chance that I was still existing and able to read was Ed Moll. I had an interesting letter from our erstwhile pugilist. Ed has deserted the ranks of the consumers of Higgins' Ink and has entered the ranks of the textile industry. He has condescended to work for the Farr Alpaca Company of Holyoke, Mass. Apparently, his hydraulic lab experience is a great help for he writes, "My most important task is running waste tests. If you want a job, try weighing 5000 lbs. of cotton in lots varying from 2 oz. to 40 lbs. On one test I did this some four times. Now I can guess the weight by feeling a bunch of the stuff." Ed's address is the Y. M. C. A., Holyoke, Mass.

Ollie Jones' exact whereabouts have been determined. He was last seen at the Consumer's Power Company, Jackson, Mich. He had on a natty sport suit, checkered hose, and was smoking a briar pipe. He has acquired an automotive apparatus of unknown genus and spends his week-ends posing as an Australian count on the country estate of some fair Jackson damsel. Any other information wanted?

Sal Black has joined the ranks of the greatest power company in the Middle West and between us we try to keep said power company from going on the rocks. Sal claims he only weighs 215 plus now, but I question the accuracy of his estimate. His main duties so far have consisted in making stream measurements through three feet of ice in this cold contree.

What is the matter with you bums? How's for snapping out of your self-sufficient and highly elevated atmosphere and letting me know when you expect the next raise, etc. My imagination is nearly exhausted and if I don't hear from some of you by next month I'm going to pull in the sign and go out of business.

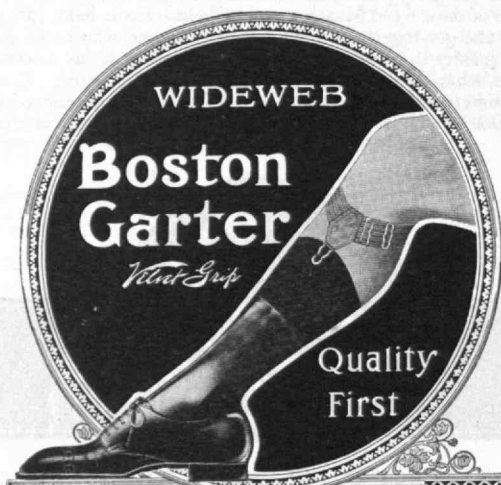
Course I signing off till next time. Goodnight little folks.

J. D. Fitch, *Secretary*,
Minnesota Power and Light Company, Duluth, Minn.

Course X

Here is a little news in the order in which it came to me. From Van Allen: "Spent a month in San Antonio, Tex., with the Air Service, and when I left there went to Los Angeles, Calif., for a couple of weeks, going then to San Francisco and taking the boat there for New York via Panama Canal. Wonderful trip and experiences! I am holding down the position of head of the science department at the Riverdale Country School for boys in the Upper Bronx, New York City. Good job, but I miss the old gang and scenes in the good old cities of Boston and Cambridge. Hope to make a visit there in the near future over some week-end."

Good old Sinnicks has been truly leading the life of an engineer. In answer to my card he has sent a really great letter. I read parts of it to everybody I have seen, even to my boss. Here is some of it, written from California. "Well, I've led a hectic life since I left the 'Stute. I came West to blow up with the country and I got blown. I had a nice job staked out when I left home down in Pittsburg, Calif., with the National Chemical Company in a calcium arsenate plant. I had been working there four days when they decided to shut down the place for repairs and alterations, so I got the grand razz. After receiving that kind of treatment at the hands of the chemical industry, I decided to take a fling at the mining game. That's how I landed in Scales. I am working for the Scales Syndicate in the capacity of almost anything the occasion demands. I'm sort of general nuisance around here, time-book-and storekeeper, camp boss, truck driver, radio operator, miner, etc. During the early fall when work got slack here I took a fling at firing one of those Porcupine Vertical Fire Tube Boilers on a No. 3 Keystone drill for a prospecting company on the claim above here. But as soon as the



**When You Ask For Bostons
Insist on Getting Bostons**

THE superior quality and All-Rubber Oblong Button make it worth while to insist on Bostons.

George Frost Company, *Makers, Boston*
How did your garters look this morning?



GENERAL RADIO CO.

Manufacturers of

**Radio and Electrical Laboratory Apparatus
CAMBRIDGE MASSACHUSETTS**

BULLETIN H SENT ON REQUEST

Classified Advertising

Mail addressed to a designation in care of this magazine will be promptly forwarded to the Advertiser

RATES

Positions Vacant: No display, 6 cents per word, minimum charge \$1.50, payable in advance.

Positions Wanted: No display, 3 cents per word, minimum charge \$0.75, payable in advance.

Positions Vacant

A CHEMIST or Chemical Engineer with from five to ten years' experience is needed by one of the large linoleum manufacturers to do development work. Location Pennsylvania. Address TECHNOLOGY REVIEW, D3125.

A MAN between twenty-three and thirty-five years of age, with or without selling experience, but with natural sales ability, of good character, and with natural enthusiasm, is wanted for a sales organization engaged in promoting an educational movement in association with one of the oldest and most honored institutions in the United States. Successful applicant will travel at first, but will eventually be given executive position not involving travel. Remuneration will be made satisfactory. Address TECHNOLOGY REVIEW, D3130.

A VERY exceptional sales engineering opportunity is offered by a Middle Western concern manufacturing printing machinery. The only candidates who will be considered must have graduated from two to five years ago and must be Southerners either by birth or by training. In reply, enclose snapshot and give details of education and experience. Address TECHNOLOGY REVIEW, D3129.

SEVERAL opportunities for Mechanical Engineers from 28 to 35 years of age to do a little investigation and development work on a special type of machinery. It would be advantageous, though not necessary, for candidates to have had oil refining experience. Salary \$3,000 to \$3,500 a year, depending upon experience and ability. Address TECHNOLOGY REVIEW, D3128.

TWO experienced electrical engineers are wanted to engage in transformer design in a newly built Transformer Works operated by one of the large electric companies. Properly qualified men can make advantageous arrangements regarding compensation. Address TECHNOLOGY REVIEW, D3127.

Positions Wanted

WANTED: An alumnus located in Seattle, Washington, would be interested in hearing from manufacturers who might be in need of an agent in that city to handle their product. He is at present handling one or two lines but finds that it will be possible for him to do justice to one or two more. Would undertake sales on a commission basis. Address TECHNOLOGY REVIEW, R2074.

WANTED: Position with consulting engineer contractor, or industrial concern. Location South America. Native tongue Spanish. 1923 graduate. Now chief of party highway location. Hydraulic engineering preferred. Address TECHNOLOGY REVIEW, R2073.

STATISTICIAN: Technology C. E. Grad., Walton School of Commerce in Accounting, twelve years railroad and factory engineering, accounting and cost data work, wishes position involving compilation of statistics and library research work in the industrial, railroad or engineering field. Location preferred, Chicago or Middle West. Address TECHNOLOGY REVIEW, R2072.

EXECUTIVES

William L. Fletcher, Inc., acting as employment managers for several hundred corporations, constantly has from 50 to 100 positions open for high grade men. Our Technical Department can locate exactly the right man for any worth while position requiring technical education and experience. Our folder "The Story of an Interesting Business" will help you to understand exactly what we do and how we do it. Sent to employers, without obligation, upon request.

80 FEDERAL STREET

BOSTON, MASS.

THE ATLANTIC WORKS

Incorporated 1853

BORDER, MAVERICK AND NEW STREETS, EAST BOSTON

Builders of Stationary and Marine Boilers

Steamships, Towboats, Steam Yachts and Heavy Machinery

CHARLES H. JOHNSON

M. I. T., '05

New England Mutual Life Insurance Company

176 FEDERAL STREET

Main 5571

BOSTON, MASS.

SAMSON CORDAGE WORKS

MANUFACTURERS OF
BRAIDED CORDAGE
AND COTTON TWINES



SASH CORD, CLOTHES
LINES, SMALL LINES
ETC. SEND FOR CATALOG

BOSTON

MASS.



BUFF

Transits and Levels

are used on the largest work where utmost precision is required. *New catalog just issued.*

BUFF & BUFF CO., Boston 30, Mass.

How to adjust a Transit—Free pamphlet
Corner 98 Green St., Jamaica Plain

MERRIMAC CHEMICAL CO.

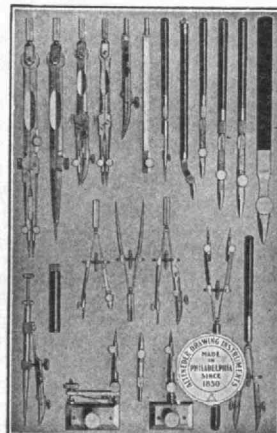
148 STATE STREET, BOSTON, MASSACHUSETTS

WORKS AT

WOBURN AND EVERETT, MASSACHUSETTS

THE largest and oldest chemical concern
in New England.

FOUNDED
IN 1853



Alteneder Drawing Instruments

Appreciated the world
over for their excel-
lence and universally
used by the expert
engineer and architect

Catalogue on Request

Theo. Alteneder & Sons

1217 Spring Garden St., Phila.

Professional Cards

A Directory of Technology Graduates and Other Qualified Engineers

T. C. DESMOND & CO., INC.

BUILDING CONSTRUCTION

247 PARK AVENUE -- NEW YORK CITY

THOMAS C. DESMOND, M. I. T. '09 President

STANLEY G. H. FITCH

M. I. T. '00

CERTIFIED PUBLIC ACCOUNTANT

131 State Street - Boston, Mass.

of PATTERSON, TEELE & DENNIS

New York, Boston, Washington and Baltimore

WILLIAM T. REED COMPANY

BUILDING CONSTRUCTION

200 DEVONSHIRE STREET BOSTON 9, MASS.

MORTIMER B. FOSTER, '01

of Basset-Foster & Co., Inc.

347 Madison Avenue - New York City

INDUSTRIAL INVESTIGATIONS — REPORTS —
MANAGEMENT — FINANCING

EDWARD A. TUCKER COMPANY

101 MILK STREET, BOSTON

Fireproof Floor Construction

Contracting Engineers

Metal Forms

METCALF & EDDY 14 BEACON STREET, BOSTON, MASS.

Consulting Engineers

LEONARD METCALF, '92 HARRISON P. EDDY CHARLES W. SHERMAN, '90

ALMON L. FALES FRANK A. MARSTON JOHN P. WENTWORTH, '10

Water Works, Sewerage Works, Industrial Wastes, Municipal Refuse, Drainage, Flood Protection, Supervision of Construction and Operation, Valuations, Laboratory for Chemical and Biological Analyses.

CHARLES T. MAIN

ENGINEER

200 DEVONSHIRE STREET, BOSTON, MASS.

Dugald C. Jackson

Edward L. Moreland

JACKSON & MORELAND

CONSULTING ENGINEERS

31 ST. JAMES AVENUE

BOSTON, MASS.

GEORGE P. DIKE

M. I. T. ex '99

Attorney-at-Law and Solicitor of Patents

350 Tremont Building, Boston, Mass.

of MACLEOD, CALVER, COPELAND & DIKE, Boston and Washington

P. F. MAHER, '17

Public Accountant

7 JUSTIN ROAD, BRIGHTON, MASS.

Audits Investigations Systems Tax Returns

1924 Continued

rains began, I came back. You see Scales is a gold hydraulic mine and we only need water and the pipe to run it. I have to laugh when I read the descriptions of the one horse towns the boys send in to The Review. Take it from me, Bill, Scales is the original one horse town. There are four houses here, we get mail three times a week, the nearest General Store and Post Office is twelve miles away and the nearest railroad is fifty-three. The only means of travel now is skis . . . I got out on another job during the summer, but not because I wanted to . . . I got hooked three times to fight forest fires."

Stringer sent his regards to all the gang. He is far from his home in Massachusetts. He mentioned the fact that Vic Moyes is back at the 'Stute as Professor Hamilton's assistant.

Jack McCoy sent in a very fine letter, too. He has been all through the Practice School and says it was one great experience.

Stern informs us that there has been a change in the situation in Washington. Joe Shea and Rabkin have enlisted in the Patent Office. "Tommy Wharton, Charley Daley and I roomed together until Christmas when we all came home for the holidays. When it came time to return, Daley went alone as we other two remained in Boston, having made new connections here. Wharton is with a patent law firm and Yours Truly gets paid by the New England Tel. & Tel." Hap Stern adds some news about Mike Konrisky, who is learning the oil business in California. Merklelson and Schneider are around Boston somewhere. I am very grateful to Hap for he seems quite glad I am not in Mattewan, N. Y.

Hood Worthington sent in a very fine letter and I am beginning to like this job a little. It's rather hard on you lads when you can't read the entire letter. Here's the fine sludge. "Bob Mackie and Fred Reed are actively engaged in operating the MacReedy Gas

Producer. They promise us a great time on the opening day . . . Brug is working around X-rays in the department's new lab. The other day I saw an X-ray picture he took of a metal. . . No, I am not out for Tech Show this year." You must understand that these sentences have been snatched from all over the letter.

Here is a dandy letter from Hank MacMillan. "During July and the first part of August made a trip to the coast and return. Was in Los Angeles about three weeks, then up to Vancouver and home through the Canadian Rockies. Would liked to have bummed my way around but time did not permit. Saw a little of the U. S. A., anyway. Came down to P. & G. September 1. Have had variety of jobs. Chemical division work consists in developing better processes and doing pure and applied research as needed to accomplish that end. For a month I ran an experimental still in which we were deodorizing Cresco to remove the odor from the hardening process. They discontinued the work temporarily so I was transferred to the oil refinery (cottonseed, not petroleum). Had bleach test to run relative to bleaching efficiencies of various earths. Also had a splendid chance to see the refining of oil for edible purposes."

A month later Mac was working in the Laundry Research Department helping to wash clothes better. They soon had him out in a regular laundry making full scale experiments to improve the quality of the wash. Hank expects to work as a trouble finder in laundries having difficulty getting out good wash. With research, and the widening out to include other users of soap, his prospects seem good. I am with you, Mac, for better wash-room practice.

The Scribe is still at the same old job and would like to see any of the old gang when they are near New York City.

Wm. B. Coleman, *Secretary*,
120 Broad Street, Matawan, N. J.

The Massachusetts Institute of Technology

CAMBRIDGE, MASS.

The Massachusetts Institute of Technology offers Courses, each of four years' duration, in Civil, Mechanical and Electrical Engineering; Naval Architecture and Marine Engineering; Mining Engineering and Metallurgy and Geology and Geological Engineering; Architecture and Architectural Engineering; Chemistry, Chemical Engineering and Electrochemical Engineering; Biology and Public Health, Sanitary and Municipal Engineering; Physics, General Science and General Engineering; and in Engineering Administration. These Courses lead to the degree of Bachelor of Science.

To be admitted to the first year class, applicants must have attained the age of seventeen years, and must satisfactorily fulfill entrance requirements in Algebra, Plane and Solid Geometry, Trigonometry, Physics, Chemistry, English, History, and French or German and one elective subject. Examinations are required in all subjects except Chemistry, History and the elective, the requirements for which are fulfilled by the presentation of satisfactory certificates. A division of these entrance subjects between different examination periods is permitted.

Entrance examinations are held at the Institute in September. In June, applicants will be examined by the College Entrance Examination Board in Boston, New York, Philadelphia, Chicago and many other cities in America and Europe. A circular stating times and places is issued in advance by the College Board.

Graduates of colleges and scientific schools of collegiate grade, and in general all applicants presenting satisfactory certificates showing work done at another college corresponding to at least one year's work at the Institute, are admitted, without examination, to such advanced standing as is warranted by their previous training.

Graduate courses leading to the degrees of Master of Science, Master in Architecture, Doctor of Philosophy and Doctor of Science are also offered. Special research Laboratories of Physical Chemistry, Applied Chemistry and Science have been established.

PUBLICATIONS

The Institute publishes a number of bulletins designed to acquaint prospective students and others who may be interested with its requirements, facilities, instructional aims and subjects. These will be mailed gratis and post free upon request.

For general information, requirements for admission, brief description of courses, etc., ask for *Bulletin A*.

For schedules of courses and detailed description of subjects of instruction, ask for *Bulletin B*.

For the announcement of courses offered in the Summer Session, ask for *Bulletin C*.

For information on Advanced Study and Research, ask for *Bulletin D*.

For the report of the President and the Treasurer, ask for *Bulletin E*.

For a popularly written explanation of Engineering Course content, ask for *Bulletin Y*.

For these bulletins, or for any other information, address

THE TECHNOLOGY REVIEW BUREAU
ROOM 3-205, MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASS.

What Is Creative Printing?

It is a kind of printing that requires more than a big plant, huge equipment, many men and much machinery.

It is a kind of printing that has ideas and ideals as well as good typography to recommend it.

It is a kind of printing that has behind it the imagination, the vision and the constructive power never evident in printing that is just printing.

It is effective printing rather than printing for effect.

It is the kind of printing we are doing for others and will be glad to do for you.

PERRY & ELLIOTT COMPANY

BOSTON



LYNN

Printers of
Technique 1925
Fine Booklets and Catalogs
Direct-by-Mail Advertising Campaigns
Commercial Printing of Every Description

NOTE: Perry & Elliott Company is now under the sole management of FRANK S. ELLIOTT, Class of '05.